ANNUAL STATISTICAL REVIEW 15 CENTS A COPY

THE OIL WEEKLY

OIL & GAS ENGINEERING

News Statistics

TRET-O-LITE

PROCESS PATENTED

The standard economical process for conditioning crude oil to pipe line requirements is TRET-O-LITE . . . acclaimed by valid patents as the original inventor and developer of valuable processes for treating crude oil emulsions. Superior results are assured.

TRETOLITE COMPANY

MANUFACTURING CHEMISTS

Plants and Laboratories

ST. LOUIS, MO.

DALLAS - - LOS ANGELES

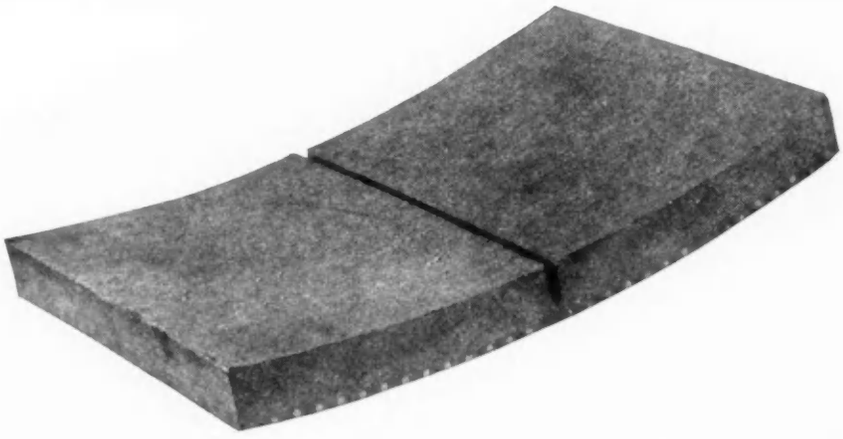
REPRESENTATIVES IN ALL PRINCIPAL FIELDS

January 29, 1932

ADVERTISERS' INDEX, LAST PAGE EDITORIAL INDEX, PAGE 19

★ LONGER SERVICE ★ REDUCED COSTS

NO SQUEALING · SMOKING · BURNING OR KICKING



YOU CAN DEPEND UPON

remarkable performance

WITH AMERICAN BRAKEBLOK

The performance of American Brakeblok under the most severe conditions of oil well braking service is nothing short of remarkable. This utterly different, non-compressible brake material is slashing costs to a degree never before achieved. It is a common thing for American Brakeblok to cut braking expense squarely in two.

American Brakeblok can be depended upon for far longer life and more ton miles of service. Smoking, burning, squealing and kicking are eliminated. A constant co-efficient of friction is maintained. Brake flanges are kept smooth.

All of these advantages have been thoroughly proved and the long list of Brakeblok users is growing each day. We will be glad to send you complete and interesting information about American Brakeblok. Write for it.

AMERICAN BRAKE MATERIALS CORPORATION • 4660 Merritt Ave • Detroit

Sales Offices: New York, Cleveland, Chicago, Los Angeles, San Francisco

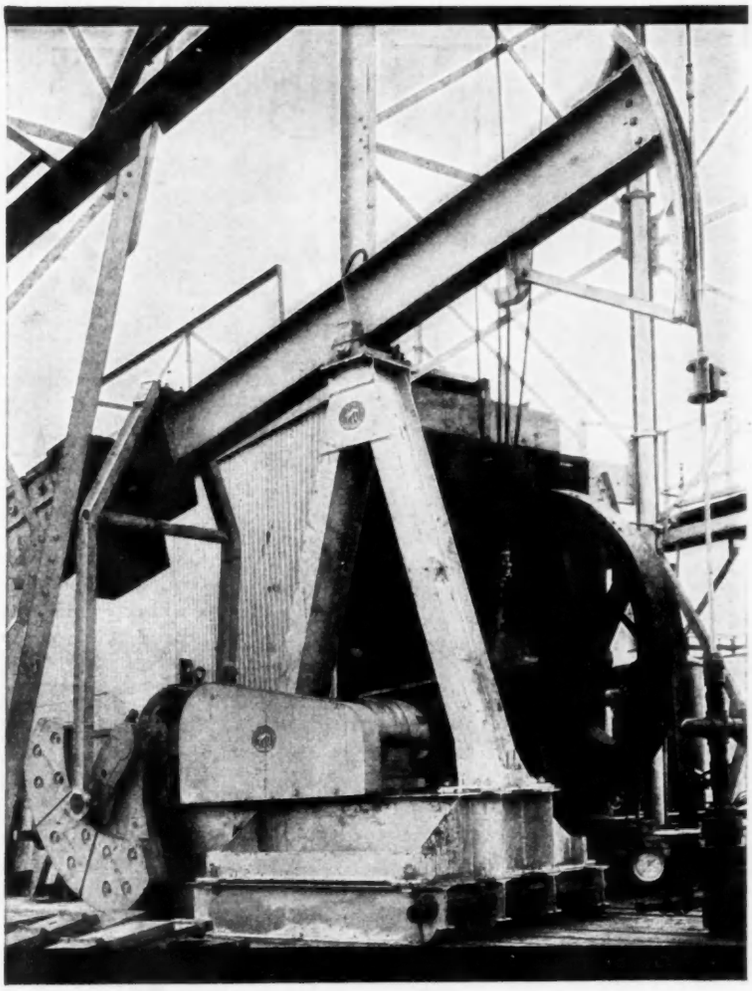
A Division of AMERICAN BRAKE SHOE AND FOUNDRY COMPANY

AMERICAN BRAKEBLOK TRADE-MARK

★

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

HOLD DOWN PRODUCTION COSTS WITH IDECO PUMPING UNITS



IDECO TYPE "A-3" UNIT PUMPING 6300-FOOT WELL ON 51" STROKE, LONG BEACH, CALIFORNIA

IDECO
- Standard Steel Buildings
- Gas & Oil Drilling & Pumping Equipment
- Electric Power Transmission Equipment

ROOTS-CONNERSVILLE
- Blowers
- Gas Pumps
- Boosters
- Exhausters
- Pumps
- Meters

STACEY
- Stacey-Klonne Dry Seal Holders
- Telescopic Holders
- "Bullets"
- Purifiers
- Stacks
- Tanks
- Penstocks

PROFITS DEPEND UPON LOWERED PRODUCTION COSTS . . . MORE TODAY THAN EVER BEFORE

Obsolete equipment can't be tolerated in these days when "the survival of the fittest" ceases to be an interesting theory and becomes a STERN REALITY. Profits are to be made—worth while profits—in the oil industry, as in other industries, but only by those equipped to produce on an economically sound basis. Only when oil is lifted economically can it be lifted profitably. Today out-of-date pumping equipment means "out-of-the-running" where profit is concerned. IDECO A-3 Pumping Units are built to meet conditions requiring lowered production costs. It will pay you, as it has done others, to investigate the advantages of this new pumping unit . . . Write or wire for further information.

INTERNATIONAL DERRICK & EQUIPMENT

DIVISION OF INTERNATIONAL-STACEY CORPORATION

New York Pittsburg Cincinnati Columbus Marietta Connersville Chicago Detroit St. Louis Wichita
Tulsa Fort Worth Houston Shreveport Los Angeles Buenos Aires Maricaibo

Branches and Stocks in Every Active Oil Field

The Tool-

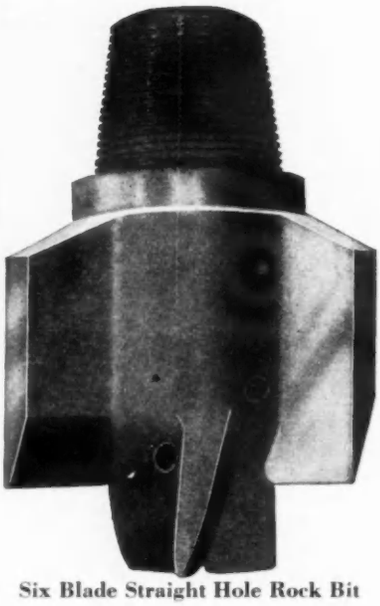
Patented Serial No. 487,553

Rock Bit Locked
U. S. Serial
No. 438,542

Fish Tail Bit Locked

★

Brewster Products are of the finest workmanship and design. While their practical working combinations have proved this very economical.



Six Blade Straight Hole Rock Bit

★

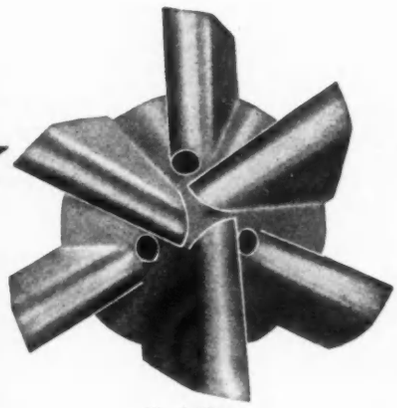
The Brewster A. P. I. Straight Hole Rock Bit is designed to drill rapidly through the hardest of rock and to make a hole straight, full gauged, and through any formations. The diamond like hardness of its cutting edge combined with scientific design and skillful Brewster workmanship, assures a straight hole.

Safety Drill Collar!

★

Brewster Safety Drill Collars give a positive lock for any style bit . . . do away with grief and trouble from failure to "make up the bit" . . . and leaves nothing to chance. Made in all sizes—A. P. I.

Ask the man who has used one.



End View

BREWSTER PRODUCTS

Pusher

.. knows from Experience

. . . that the Brewster Perfection Core Barrel is equipped with a SPLIT LINER so the core comes out undisturbed and unbroken;

. . . that the TYPE M CUTTER HEAD allows water to circulate on the cutting edge, so the core is cut clean and quickly from the hardest of formations;

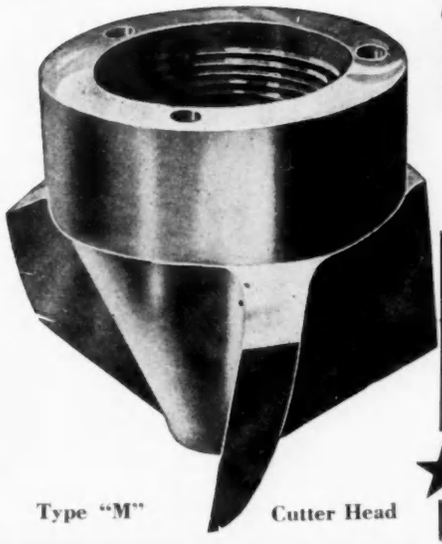
. . . that the TYPE M BIT BODY (furnished free) can be used with the Type M Cutter Head on Type C Core barrels;

. . . that by use of the Type M Bit Body ROLLER CUTTER HEADS can be used with the Perfection Core Barrel.

Roller Core Bit Head

★

Chrome Nickel Steel is used in the manufacture of Brewster Products, which helps make them a standard of service and quality with A. P. I. approval.



Type "M" Cutter Head

Warehouses: The Iverson Specialty Co., Oklahoma City, Oklahoma, Phone 2-2833; The Brewster Houston Store, 2000 Harrington Street, Capitol 2031.

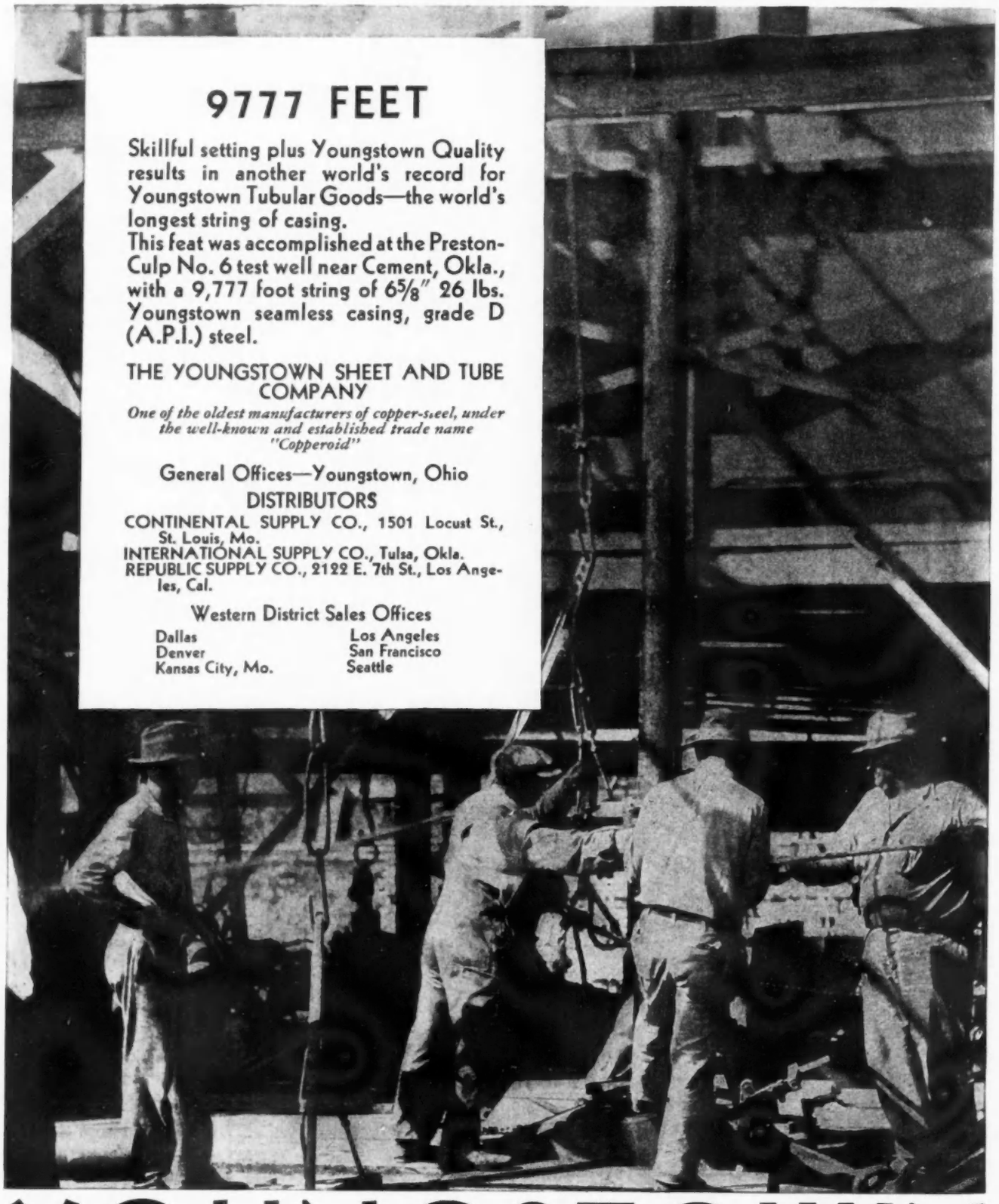
Export Distributors: Acme Well Supply Company, Inc., 136 Liberty Street, New York City.

★

The Brewster COMPANY~INC.
Shreveport Louisiana

BREWSTER PRODUCTS

WORLD'S LONGEST CASING STRING



9777 FEET

Skillful setting plus Youngstown Quality results in another world's record for Youngstown Tubular Goods—the world's longest string of casing.
This feat was accomplished at the Preston-Culp No. 6 test well near Cement, Okla., with a 9,777 foot string of 6⅝" 26 lbs. Youngstown seamless casing, grade D (A.P.I.) steel.

THE YOUNGSTOWN SHEET AND TUBE COMPANY

One of the oldest manufacturers of copper-steel, under the well-known and established trade name "Copperoid"

General Offices—Youngstown, Ohio

DISTRIBUTORS

CONTINENTAL SUPPLY CO., 1501 Locust St., St. Louis, Mo.
INTERNATIONAL SUPPLY CO., Tulsa, Okla.
REPUBLIC SUPPLY CO., 2122 E. 7th St., Los Angeles, Cal.

Western District Sales Offices

Dallas
Denver
Kansas City, Mo.
Los Angeles
San Francisco
Seattle

YOUNGSTOWN

OIL COUNTRY TUBULAR GOODS

$10,000.00

In Cash Prizes

for a simple description of the *Hammered* piston ring principle

Many times in ordinary conversation you have explained a mechanical principle in simple, plain language.

NOW . . . do that very thing again . . . and compete for a worthwhile cash award.

Ordinary Piston Rings *depend upon bulk metal for tension*, and as the outer surface of the ring wears away the tension decreases and the ring tends to collapse. American Hammered Piston Rings get their tension *from the hammering*, which scientifically alters the molecular construction of the metal and *builds evenly distributed tension into the inside surface* of the ring, giving American Hammered Piston Rings *pressure from within*. Thus as the *outer surface* of an American Hammered Piston Ring begins to wear, the *inner pressure*, having less metal to oppose it, increases in expansion and automatically compensates for the wear on the outer surface.

It is this exclusive principle of the ring that has won for it the recognition and the preference of engineering leaders. It is this principle we want to emphasize in future advertising and sales activities . . . described in a few words and in such a simple, non-technical way that *anyone* will instantly appreciate its true significance.

Here's what happened when a thirty-second of an inch was removed from the outer circumference of *two* piston rings. *Left:* The ordinary piston ring contracted, showing loss of tension. *Right:* The American Hammered Piston Ring *expanded* to compensate for the removal of the outer metal.

HAMMERED TENSION CAN'T WEAR OUT

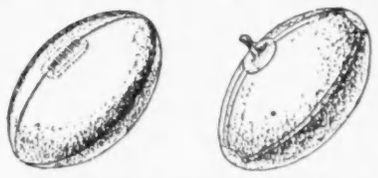
American *Hammered* Piston Rings

1st prize	$5,000.00
2nd Prize	$1,000.00
3rd Prize	$500.00
10 Prizes	$100.00 each
100 Prizes	$25.00 each

JUDGES WILL BE ANNOUNCED SHORTLY
CONTEST CLOSES MARCH 31, 1932

Rules of the Contest

1. The American Hammered Piston Ring Company will distribute $10,000.00 in cash prizes for the best, brief, non-technical description of the Hammered Piston Ring principle, showing why this principle of construction is much better than any other. Your entry can be in as few words as you wish, but it must not exceed 100 words. Explain the "hammered" principle so that anyone can understand why it is better.
2. This contest is open to all except employees of the American Hammered Piston Ring Company and their advertising agency, or the members of the family of any employee of either organization.
3. It is not necessary to be a buyer, seller or user of American Hammered Piston Rings in order to compete. It will, however, prove helpful for you to know the complete story of the product in order that you will fully comprehend the principle we want to make clear. Complete information will be mailed upon request and without obligation of any kind.
4. The contest closes at midnight, March 31, 1932.
5. Winners will be announced May 1, 1932.
6. Any contestant may send as many entries as desired, but no contestant may win more than one prize. Each entry must be on a separate sheet of paper, upon which appears full name and address of the contestant.
7. In case of ties, each tying contestant will receive the full amount of the prize tied for.
8. The awarding of any prize in this contest makes the entire entry the property of the American Hammered Piston Ring Company to use as they see fit.
9. In entering this contest you agree to accept the decision of the judges as final.
10. Writing ability is not necessary. Your description will be judged on the basis of how forcefully or clearly it explains the meaning of the *hammered principle of inner tension*. For example, an idea might be something like this: A football gets its tension from the air-filled rubber bladder protected on the outside by a pigskin cover. If the bladder were *on the outside*, how long would the football stand up? This is simply a suggestion of the sort of a simple, non-technical explanation of the hammered ring principle we are looking for. Other ideas better than this one will occur to you once you put your mind to it.



AMERICAN HAMMERED PISTON RING COMPANY, BALTIMORE, MD.

I AM THE SPIRIT OF ELECTRICITY

• I spring to life in whirring dynamoes to work the miracles of man, my master. My tasks are myriad. I am a tireless servant. I light the tiny filaments of a surgeon's lamp or grind a mile length string of steel into the earth on some distant lease. Subservient to man's will, I have lifted the burden of drudgery from the shoulders of humanity. I have widened man's horizon and given greater scope to his inventive genius. I turn the wheels of industry that his economic balance be preserved. I am the torch bearer ot civilization. I am the great emancipator. I am a presage of miracles to come. » » »

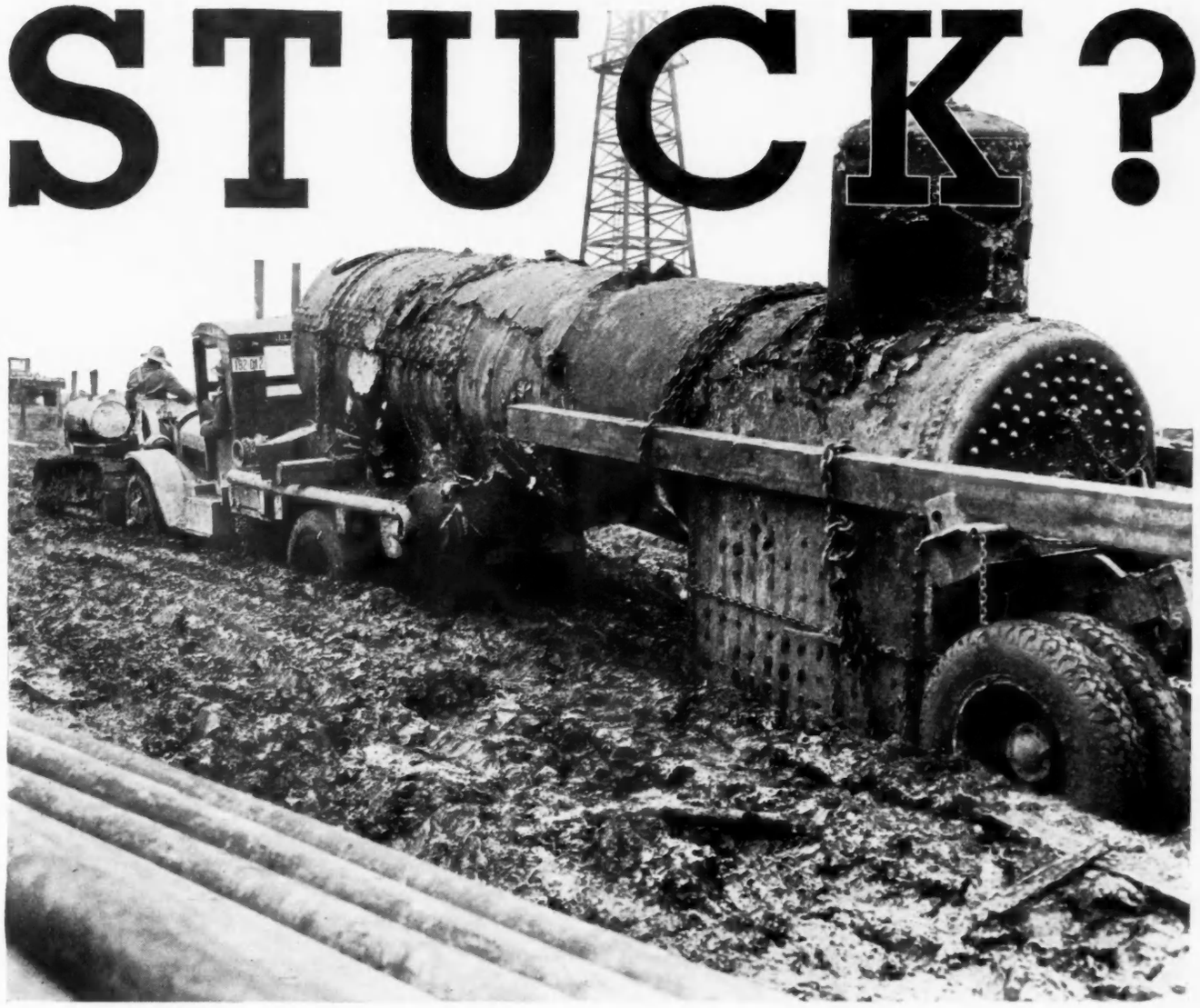
The pipe line, refining and producing branches of the oil industry are invited to use the services of our engineers. They are expert in the matter of applying Electric Power to Oil Industry needs.

GULF STATES
UTILITIES COMPANY

General Offices

BEAUMONT, TEXAS — LAKE CHARLES, LA.

STUCK?



NO, the driver even dared stop right in the mud-hole to let the photographer shoot this comparison between wheels that sink and tracks that don't! Stopped with full knowledge that his "Caterpillar" track-type Tractor could immediately pick up the load and walk ahead on this typical oil-field "road"! Confidence in their power and traction has put whole fleets of "Caterpillars" into the world's oil-fields.

Caterpillar Tractor Co., Peoria, Illinois, U.S.A.

Track-type Tractors Combines Road Machinery

(There's a "Caterpillar" Dealer Near You)

■

Prices—f. o. b. Peoria, Illinois

TEN	$1100	THIRTY	$2375
FIFTEEN . . .	$1450	FIFTY	$3675
TWENTY . . .	$1900	SIXTY	$4175

CATERPILLAR

REG. U. S. PAT. OFF.

TRACTOR

ON TIME !
every time

Complete stocks of Pittsburgh Seamless Drill Pipe, Casing and Oil Well Tubing at our storage yards in Memphis enable us to serve Mid-Continent and Gulf Coast producers in record time at all times. When speed is essential wire:

Pittsburgh Seamless

Drill Pipe • Casing • Oil Well Tubing

PITTSBURGH STEEL PRODUCTS COMPANY

Pittsburgh Steel Co.

New York Pittsburgh St. Louis
Detroit Chicago Houston Tulsa

WHY YOU SAVE MONEY WITH LAY-SET

Internal stress in ordinary (non-preformed) wire rope literally eats up your money. Ordinary wire rope is like a bundle of springs—114 of them in a 6 x 19 wire rope. Each one of these 114 wires is held in place by force—resulting in a tremendous internal stress.

No wonder a firm seizing is necessary to confine this stress. No wonder the individual wires break prematurely from fatigue.

Now consider Lay-Set Preformed Wire Rope. Strands and wires lie normally in position. Wires and strands are free to do an equal share of their work. They wear down to a feather edge before breaking. There is no premature breaking of individual wires due to fatigue.

30% to 300% increased service is the result.

HAZARD WIRE ROPE COMPANY
Wilkes-Barre, Pennsylvania

Send me by return mail your booklet entitled, "12 Reasons Why You Save Money With Lay-Set Preformed Wire Rope." O. W.—1-29-32

Name_____

Address_____ MAIL TODAY

Company_____
(Write on margin type of service)

EVERY WIRE ROPE USER SHOULD READ THIS BOOK

There are 12 leading reasons why you save money with Lay-Set Preformed Wire Rope . . . 12 easily understood facts about Lay-Set that you should know before you order another foot of wire rope.

This is the beginning of a new year. Scan your wire rope bills of 1931. Figure how much 30% to 300% increased wire rope service means to you in dollars and cents . . . plus the saving in fewer recabling jobs. Now is the time to plan for better wire rope efficiency.

Send for our new booklet, "12 Reasons Why You Save Money With Lay-Set Preformed Wire Rope." It explains in a non-technical manner, why the elimination of internal stress results in 30% to 300% increased service, depending upon the type of your equipment and nature of the wire rope service.

Attached to the booklet, you will receive a sample length of Lay-Set Preformed Wire Rope—so you can . . .

MAKE THIS TEST ●

Unwind a strand as shown in the illustration to the right. Note the perfect helical shape to which the strand and wires in the strands are set.

Then reverse the strand end for end and put it back into the rope. You won't be able to tell which strand was removed.

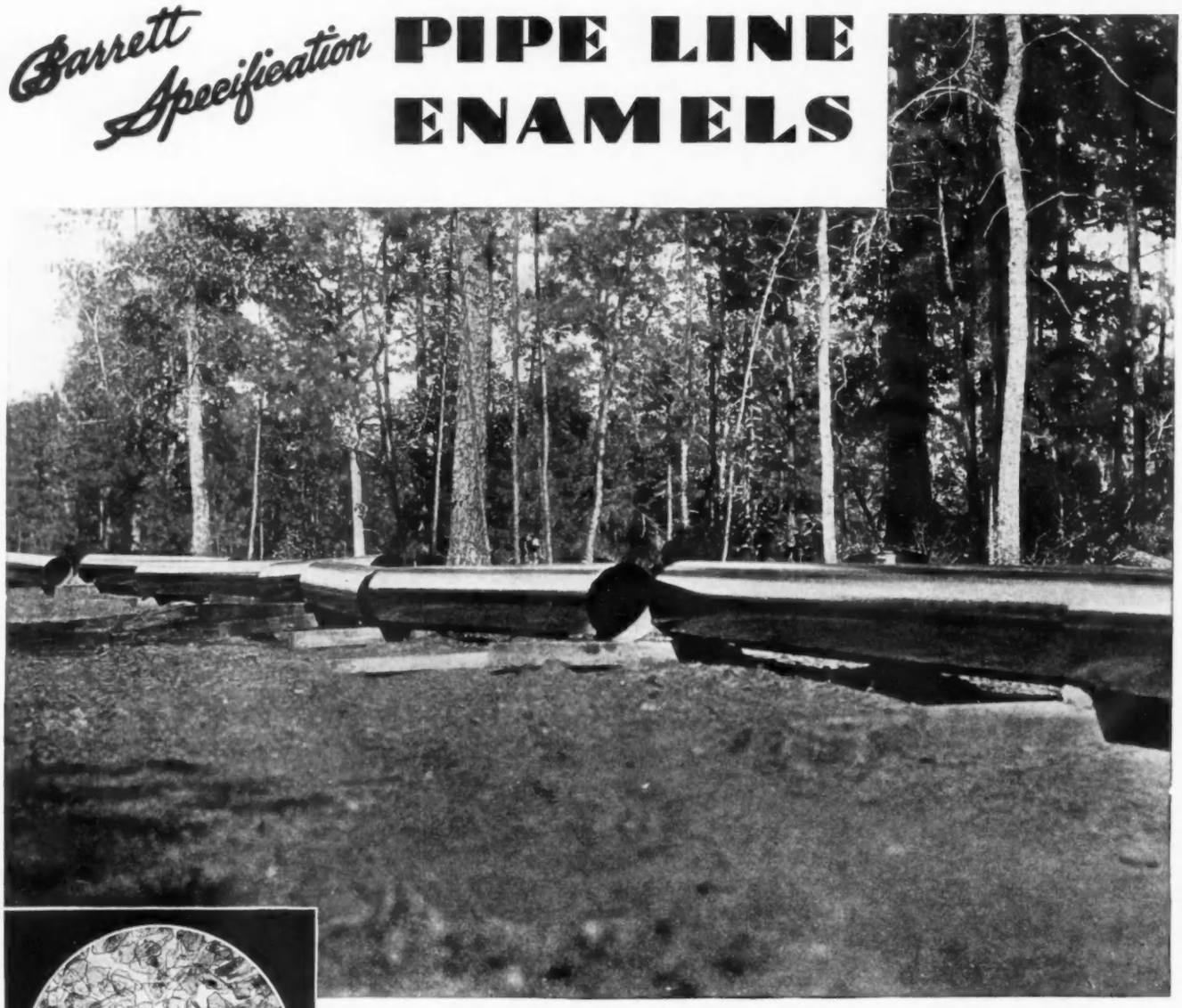
The coupon at the top of this page is for your convenience—mail it to us today for your copy of "12 Reasons Why You Save Money With Lay-Set Preformed Wire Rope." If you prefer, write us in full. Tell us the type of your equipment. Our engineering staff is at your service to help you save wire rope money. Write or wire today.

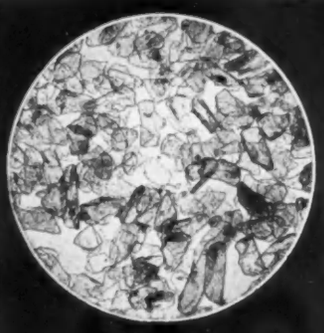
REDUCE YOUR WIRE ROPE EXPENSE BY 10% TO 70%

HAZARD LAY-SET PREFORMED WIRE ROPE

Flake-type mineral reinforcement gives tensile strength and toughness to

Barrett Specification PIPE LINE ENAMELS





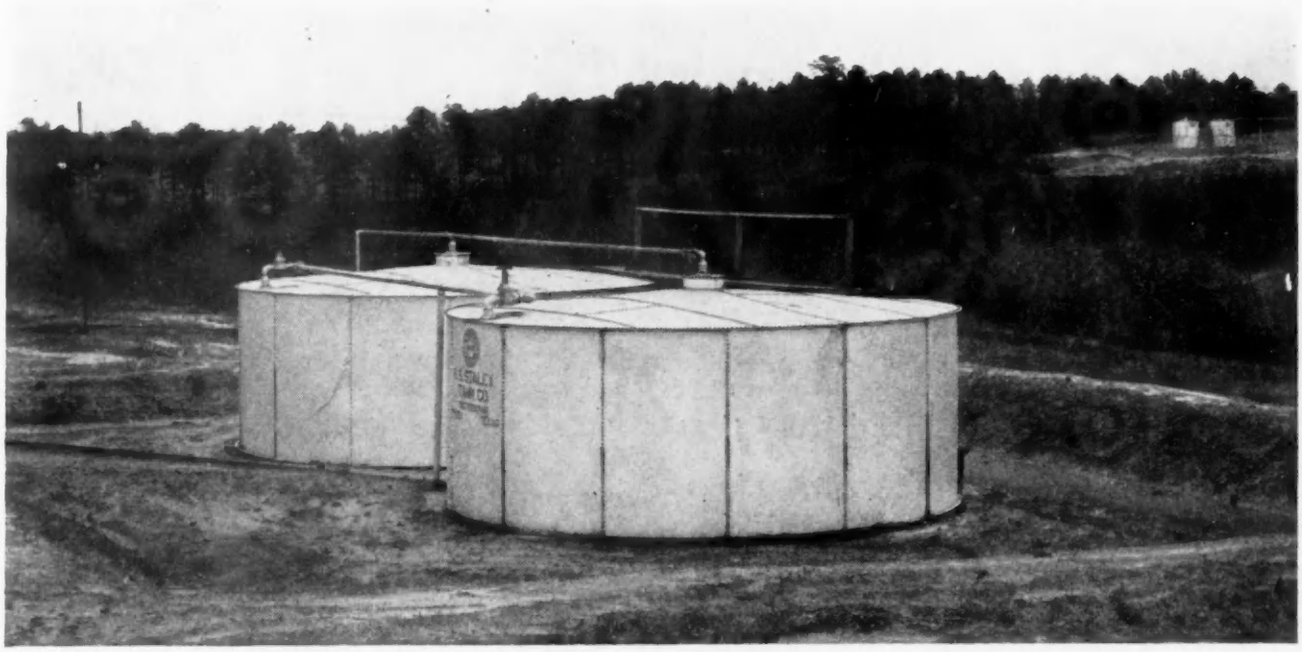
This reproduction of a photomicrograph shows the interlocking of the flakes of the internal reinforcement used by Barrett. By laminating with the waterproofing agent they give Barrett Pipe Line Enamels unusual tensile strength and toughness.

For pipe of large diameter The Barrett Company will furnish equipment required to revolve pipe and spread enamel.

THE reinforcement used with Barrett Specification Pipe Line Enamels is a plate-like mineral. It not only adds tensile strength and toughness because these flakes interlock and laminate when mixed with coal tar pitch, but it is also non-porous, non-absorbent, chemically inert and extremely resistant to electrical currents. Moreover, its use allows for more pitch per finished ton of enamel. And since coal tar pitch is the finest waterproofing agent so far discovered, its greater percentage in Barrett Enamels means greater waterproofing efficiency. Write, phone or wire for complete information.

The *Barrett* Company

40 Rector Street New York



Two 500-Bbl. Low Type A.P.I. Maloneys on the Alma Pet. Co. Cox Lease, Gladewater, Texas. Erected by S. S. Staley Tank Co., Distributer, Tyler, Texas

ADD TO YOUR PROFITS

The Money You Now Lose by Evaporation from Lease Tanks

By installing Maloney *Vapor-Pressure* Lease Tanks you can add to your net income the money value of the oil which otherwise would be wasted by breathing. These tanks hold ALL of your oil until it is delivered to the pipelines.

Our *Vapor-Pressure* Tanks are equipped with the most improved type of combination vacuum-pressure valves to restrict the movement of vapors. They are built of 12-gauge, or heavier, sheets of rust-resisting Keystone Copper Steel, amply tied and reinforced with 2-inch angles, and coated with our special aluminum paint, which is made with a vehicle containing water-proof and alkali-proof Inhiburine.

These tanks insure maximum profit for operators because they eliminate evaporation waste and reduce replacement expense.

"Alone in Quality"

MALONEY TANK MFG. COMPANY
38 North Peoria Ave., Tulsa, Oklahoma

Distributers at All Principal Petroleum Points
Packed in Steel-Bound Crates for Export

MADE OF KEYSTONE AMERICAN

UNION WIRE LINES
Consistently and Absolutely Dependable
. . . and Jarecki recommends them
Every oil man knows that unless wire lines are built for the most strenuous service they will never "stand the gaff" in the oil industry.
. . . and Jarecki carries them
Oil men know, too, that if Jarecki carries a product in all of its stores, that product may be absolutely depended upon in service.
That is why experienced oil men select Union Wire Rope for the toughest jobs they have.
Jarecki
MANUFACTURING COMPANY
Home Office and Factory—ERIE, PA., U. S. A.
General Office—ST. LOUIS, MO.
District Offices—Pittsburgh, Pa.; El Dorado, Kans.; Tulsa, Okla.; Newark, Ohio; Eastland and Dallas, Texas; Lawrenceville, Ill.
Branch stores at all important places in the Oil Country.

MODERNIZE

your present

SWIVELS
DRAW WORKS
ROTARY TABLES
CROWN BLOCKS
MOTORS
PUMPS

with—

and on your new equipment

SPECIFY

ROLLWAY SOLID CYLINDRICAL ROLLER BEARINGS

Submit your problems to our Engineers. Permit them to offer their recommendations for your most difficult problems. You incur no obligations.

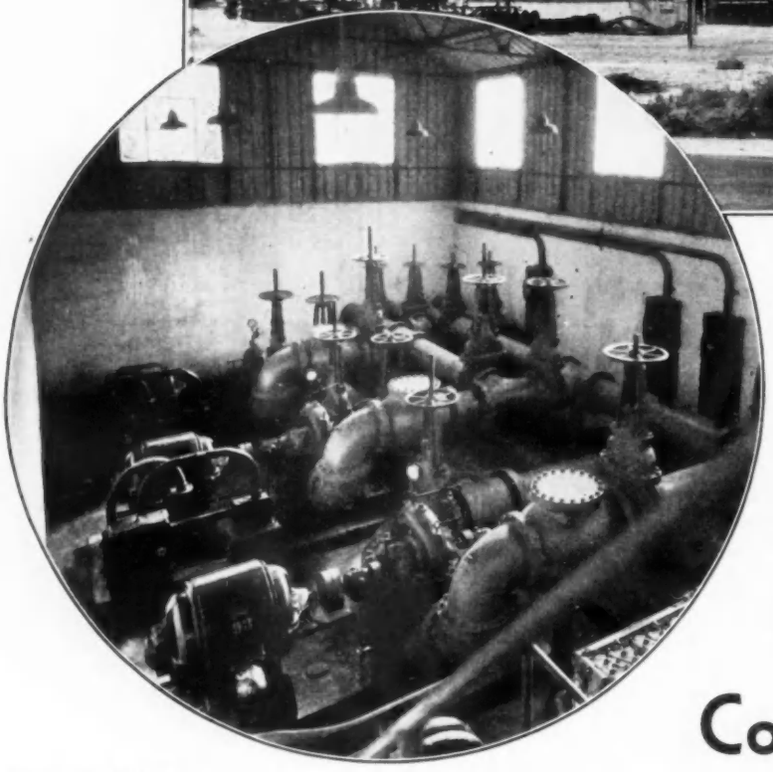
Our new engineering catalog is available. Ask for a copy.

ROLLWAY BEARING

COMPANY INCORPORATED
SYRACUSE NEW YORK

ROLLWAY CYLINDRICAL ROLLER BEARINGS

Pacific Coast Representatives
Irvin Silverberg & Co., San Francisco, California Jos. A. Masterson & Co., Los Angeles, California



General View Cosden Refinery
Left—Electric Motor-Driven Centrifugal Water Circulating Pumps in Service in Cosden Refinery.

Electricity Plays Major Role in Refining of Cosden Liquid Gas

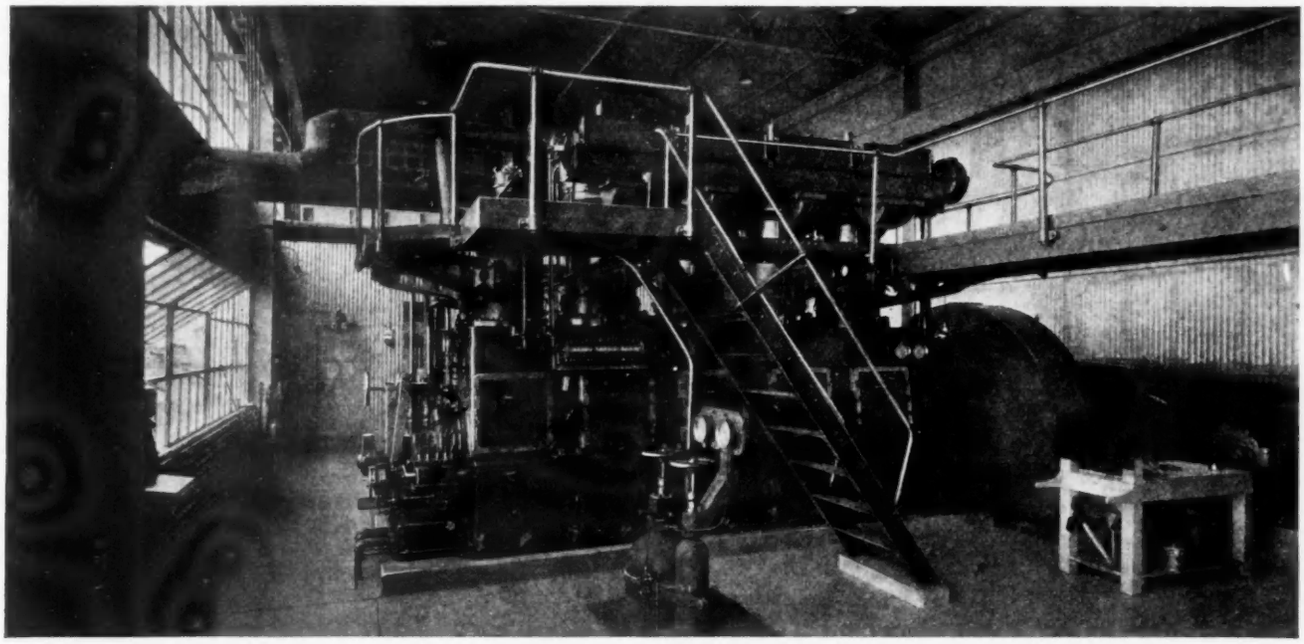
General Offices:
FORT WORTH

District Offices:
FORT WORTH
WICHITA FALLS
EASTLAND
SEYMOUR
SWEETWATER
BIG SPRING
MIDLAND
EAGLE PASS

Low first cost, economy of operation, dependability of service and freedom from accident hazards are only a few of the outstanding traits of the electric service employed by the Cosden Refinery, one of Big Spring's largest industries. Cosden Liquid Gas, known the world over for its high octane content, is being refined in a completely electrified plant.

Investigate the many ways electric power can serve your refinery. Our engineers will gladly show you where additional electrical installations will increase the efficiency of your plant.

TEXAS ELECTRIC SERVICE COMPANY



60 McINTOSH & SEYMOUR ENGINES totaling 29255 hp. bought during 14 years by one customer alone!

That is the record of purchases by The Prairie Pipe Line Company

McIntosh & Seymour Engines *Bought by* THE PRAIRIE PIPE LINE CO	Units	Total H.P.
June, 1916	3	1285
October	1	500
April, 1917	2	570
May	2	785
November	2	1330
July, 1918	1	500
September	3	1500
October	4	2660
August, 1919	3	1200
November	2	1330
March, 1920	5	2665
August, 1921	1	600
September	1	665
December	6	2400
March, 1922	1	400
September	1	600
March, 1925	1	75
August, 1926	2	800
May, 1927	3	2400
January, 1929	7	5000
March	6	1000
May	1	80
November	1	110
September, 1930	1	800
Total	60	29,255

THE superior economies and dependability of McIntosh & Seymour Engines are generally conceded in the oil pipe line industry. They are convincingly indicated in the case of The Prairie Pipe Line Company by almost continuous repeat installations throughout a 14-year period, and after the long-time satisfaction of many older units was a matter of record.

If you need more, more dependable and cheaper power, or are figuring on complete new stations, investigate McIntosh & Seymour Diesel Engines, and let our Engineers explain and prove Diesel possibilities.

McINTOSH & SEYMOUR CORPORATION, Auburn, N. Y.

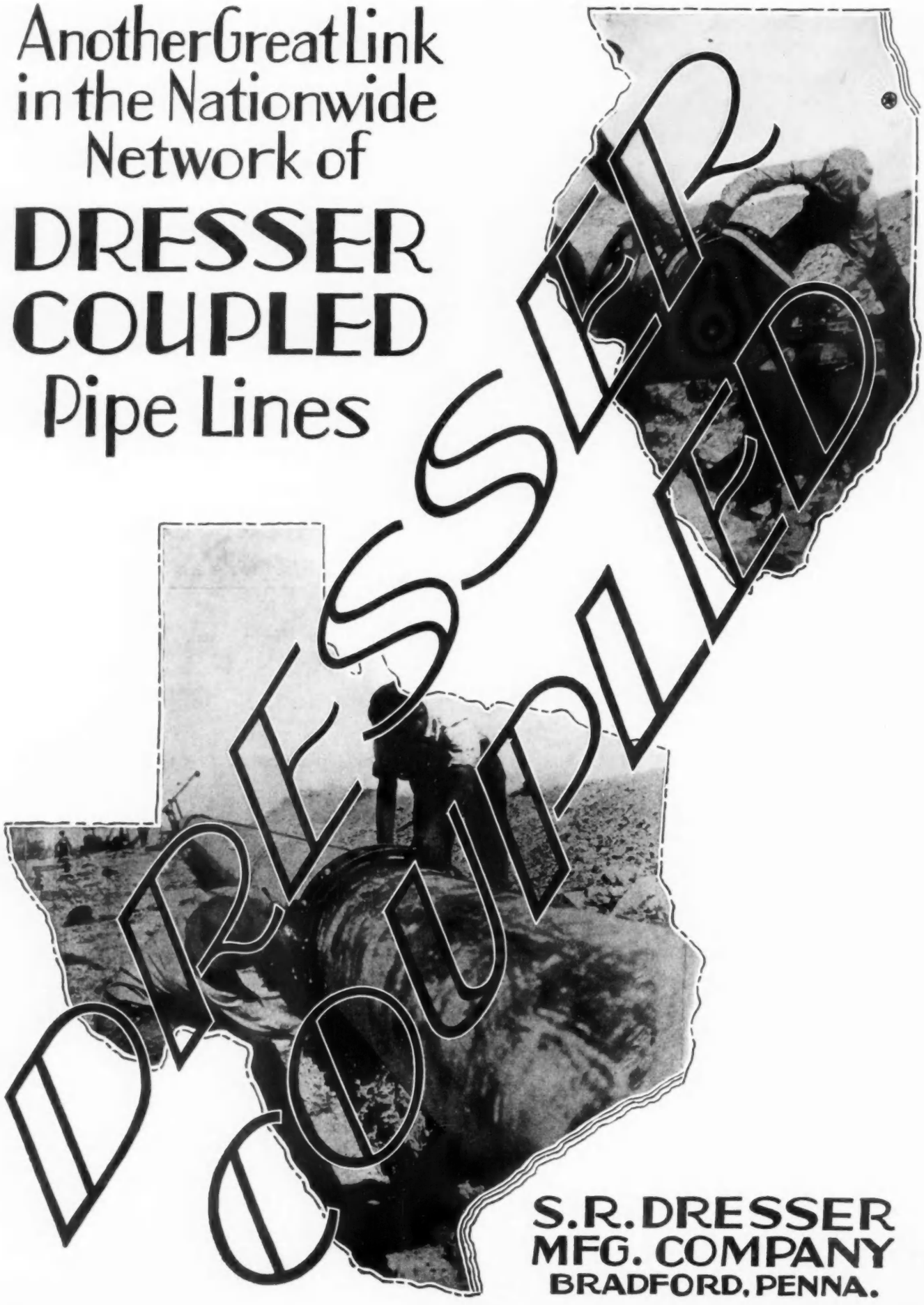
Division of **American Locomotive Company**

New York City	Kansas City, Mo.	Jacksonville, Fla.	Houston, Texas	San Francisco
30 Church Street	1016 Baltimore Ave.	412 Bisbee Bldg.	2408 Esperson Bldg.	514 Matson Bldg.

McINTOSH & SEYMOUR DIESEL ENGINES

Another Great Link in the Nationwide Network of

DRESSER COUPLED Pipe Lines



S. R. DRESSER MFG. COMPANY
BRADFORD, PENNA.

THE OIL WEEKLY

January 29, 1932
Vol. 64, No. 7

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THE GULF PUBLISHING COMPANY
HOUSTON, TEXAS

S. W. ROBINSON
Editor

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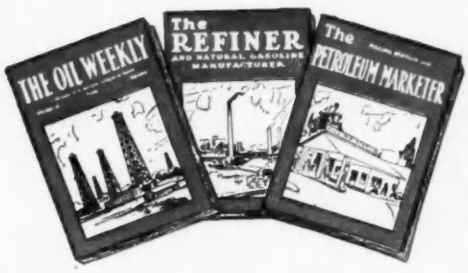

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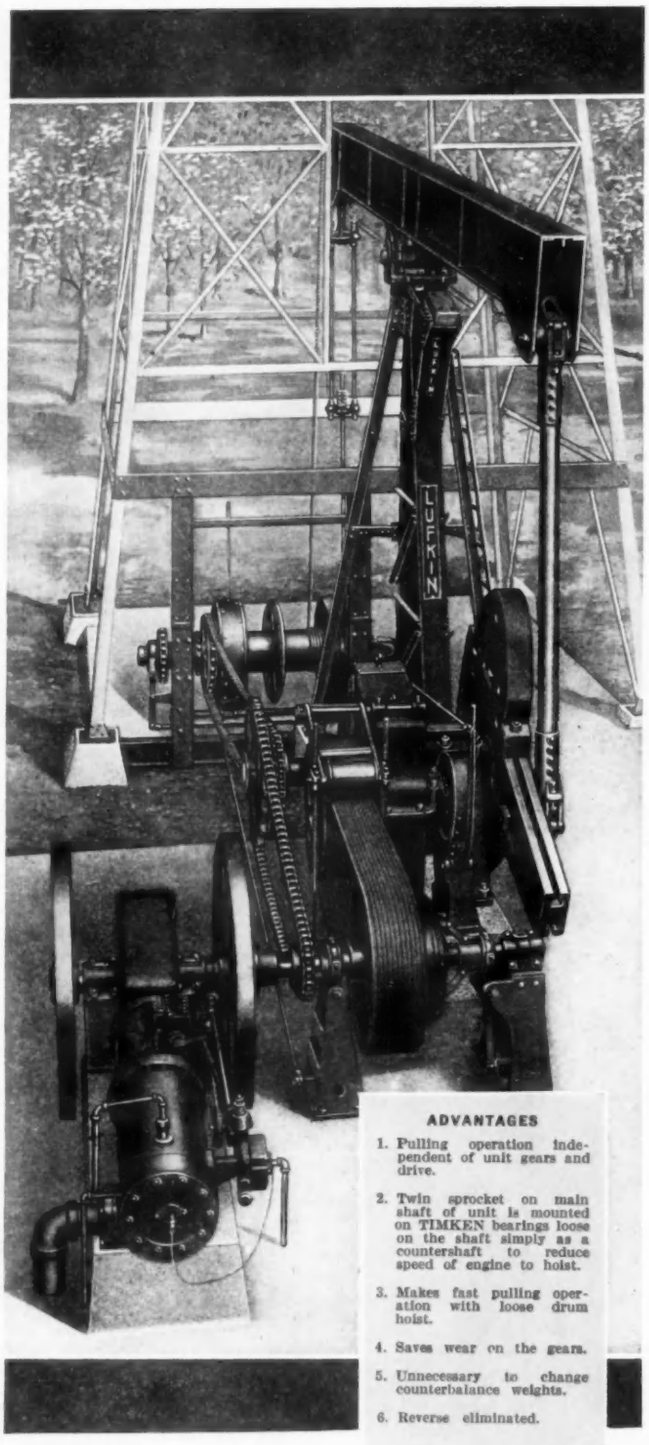

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THE OIL WEEKLY

SPECIALIZED TO OIL AND GAS PRODUCTION
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ENGINEERING • NEWS • STATISTICS

The Changing Panorama

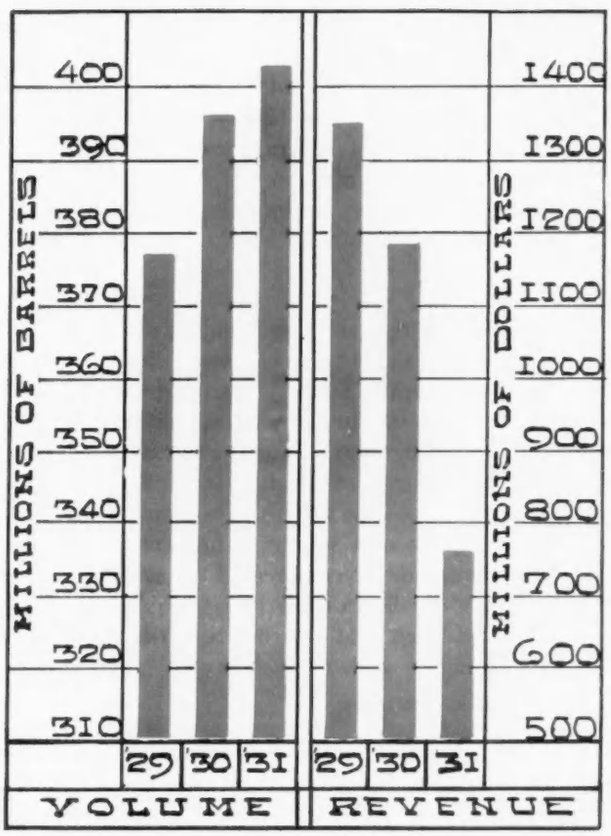
How the oil industry improved its position everywhere except at the bank during 1931 is shown in a review of statistics based on official figures for most of the year and part estimates. World production was down about 44½ million barrels, in the United States nearly 48 million barrels. United States exports were up for crude oil, other products badly off. Imports of all oils were off. Stocks of all oils were 43½ million barrels decrease, refined oil stocks being up 3½ million barrels while crude oil stocks declined 47 million barrels. Fewer wells were drilled but the potential supply was greatly increased. Consumption of gasoline increased only 1.8 per cent. All improvement of decreased supply and improved demand was offset by low prices of both crude and refined products. Page 35.

South America Marks Time

Venezuela lost second place among oil producing countries to Russia during 1931. It was the first time for Venezuela to record a loss in volume of recovery, and that loss was by reason of curtailment which was the big influence in showing a 10 per cent reduction for South America as compared to the previous year. Other South American countries, except Venezuela and Peru, are not so well in line on the curtailment program, but Venezuela's reduction of 20½ million barrels is about twice as great as the result of the effort in the United States. Present plans are that the South American development program will continue at its present retarded rate, only Trinidad seeking expansion under its favored British position. Page 26.

Production Down Again

Production of crude oil in the United States dropped again last week, this time 31,950 barrels to 2,161,500 barrels per day for the week ending January 23, as reported through the American Petroleum Institute. This indicates a draft on domestic stocks at the rate of 26,000 barrels daily, east of California. California, on the other hand, has production of more than 43,000 barrels daily above demand in that quarter, so that net addition to stocks for all districts was around 17,000 barrels daily. Refiners' runs of crude to stills was up



DOMESTIC GASOLINE SALES
Volume and Revenue

18,000 barrels daily to 2,226,000 barrels, and stocks of finished gasoline were increased about one-half million barrels to 39,738,000 barrels. Page 83.

Refiners Improve Position

The gasoline market is looking up (as it must from current position). Refiners in the Mid-Continent are showing a decided disposition to curtail their runs, and as a consequence U. S. motor gasoline is not being quoted below three cents in that quarter, and some stuff was moving at an eighth or a quarter above that. This activity on the part of refiners is helping their position but is not encouraging to producers seeking freer markets. The refiners are disposed to use up crude previously bought as a means of conserving their cash, which forces reduction in crude production while crude stocks are being drawn upon, unless the producer is willing to run crude to his own tanks. A disturbing thought is that these refiner buyers evidently anticipate that their supplies of crude can later be replaced at prices no higher than present. Page 87.

Still Find Them

Seven new fields were opened in the Texas-Louisiana Gulf Coast during 1931, as well as a number of new ones and important extensions in the adjacent South Texas area. This during a quiet year when all efforts apparently were being devoted to work in proven fields where curtailment was the biggest factor. Oklahoma and Kansas each had several new fields, Wyoming added one and California several. A careful listing of these discoveries makes an imposing tabulation. Page 91.

A method of lifting oil from pumping wells which has the effect of "making pumping wells flow" has been developed by Hughes Tool Company of Houston. The device consists of a plunger working within the tubing which brings "slugs" of oil to the surface by the aid of accumulated pressure which is controlled by a valve set at the bottom of the tubing. The plunger returns to the bottom by its own weight. The force may be gas from the formation or compressed air or gas from the surface, only small pressure being required in either case. It is claimed that this device makes the cost of pumping compare with natural flow. Page 78.

Faith in what East Texas may produce was backed substantially by Atlantic Oil Producing Company when it paid three million dollars for fourteen hundred acres of proven leases with 15 producing wells. Cranfill-Reynolds Company was the seller. Page 93.

OUT OF THE HOLE AT 9700 FEET

Mid-Kansas and Ramsey's Culp 6, Cement pool, Oklahoma, with 108 stands of four-inch drill pipe standing in the derrick. *Page 68*

Germany Looking Up

Germany is one country where oil is produced that would not be favored economically through a reduction in crude output, as most of its supplies must be imported, and the country seeks to be self-sustaining. Much progress was made during 1931 toward that end in so far as oil is concerned, through the establishment of a new record for domestic production. This accomplishment was brought about by the discovery of a new field (under a potash mine), extension of three old fields and the entry of foreign interests with more efficient exploration methods. Page 32.

Interests piping gas to San Francisco are taking thought of the future supply. Exploration programs have been undertaken with oil discovery as the secondary consideration. California development otherwise is unusually quiet, but a frozen drill pipe at 8800 feet in a 9300-foot hole might be considered of moment in some quarters. Page 101.

Prospective Demand Indicates Continued Curtailment

By H. J. STRUTH
Staff Economist

THAT there will be a definite need for continued production control during the present year is indicated by prospective demand. Last year's results show that there was a decline in crude production of nearly 48,000,000 barrels. This year, the industry will be obliged to reduce production at least another 20,000,000 barrels. However, the total demand for American crude will probably amount to 860,000,000 barrels, although sound economic principles dictate the necessity for supplying at least 30,000,000 barrels of the total market requirements from storage. This means that the industry will be obliged to hold production at a rate not to exceed an average of 2,275,000 barrels a day, or at the annual rate of 830,000,000 barrels.

The outlook for this year indicates a further slight gain in domestic gasoline demand—a prospective increase over last year of eight-tenths of one per cent. However, the industry will probably experience further contraction in its foreign markets, resulting in a net decline in total gasoline consumption of perhaps one per cent. While refineries of the United States consumed last year about 892,000,000 barrels of crude, the limits dictated by this year's gasoline demand call for a total of but 850,000,000 barrels, or approximately the total amount produced by the industry last year. Other consumption and exports of crude will bring the total demand for 1932 up to about 900,000,000 barrels. Since there is every likelihood that imports of crude will amount to at least 40,000,000 barrels this year, it is apparent that the net requirement for American crude will probably not exceed 860,000,000 barrels, or a daily average of 2,356,000 barrels.

The basis for this conclusion is found in the prime factor of prospective gasoline demand. Automobile registrations in the United States showed a sharp decline last year, having receded from a total of 26,535,000 cars and trucks to less than 26,000,000 at the close of the year. Yet, despite this slump in registrations, the consumption of gasoline showed an increase over 1930, due primarily to the fact that there has been a consistent gain in the average mileage utilization per motor vehicle. While automobile manufacturers are optimistic over the outlook for 1932, based upon the belief at least 2,700,000 motor vehicles will be scrapped this year, the petroleum industry faces the realization that there will actually be less cars in use than there were last year. This assumption is based upon the fact that, even though the number of cars scrapped and sold this year will show an increase over last year, the monthly average registrations will reveal a decline. Even by using the optimistic figures of the automobile industry for 1932, it is apparent that the average monthly registration will not exceed 26,245,000, against an average for last year of 26,275,000. If allowance is made for a moderate increase in average gasoline consumption this year, to say 650 gallons per motor vehicle registered (which includes all domestic consumption) the prospective demand for gasoline will not exceed 406,175,000 barrels. Add to this 40,000,0000 barrels to take care of prospective foreign requirements, and we arrive at a total prospective demand of 446,175,000 barrels, or about one per cent less than was consumed last year.

Table 1 shows what effect this year's gasoline outlook will have upon the crude situation, showing the probable total demand for gasoline and the equivalent quantity of crude oil required by refineries to produce this year's demand. It will be noted that provision is made therein for a reasonable expected reduction in crude stocks, resulting in a net production requirement for the United States of 830,000,000 barrels. However, if stocks of crude are not reduced this year, the industry could maintain production at an average daily rate of 2,356,000 barrels. Sound economic principles, however, dictate the necessity for reducing stocks of crude again this year, which places the industry's economic production limit at a daily average of 2,275,000

TABLE 1
1932 Gasoline and Crude Oil Demand
(Barrels)

Domestic gasoline demand	406,175,000
Exports	40,000,000
Total demand	446,175,000
Less, natural gasoline and Benzol	42,000,000
Less, imported gasoline	13,000,000
Net U. S. Refinery gasoline	391,175,000
Less, excessive gasoline stocks	6,000,000
Net production required from crude	385,175,000
Crude required at 45.5 per cent	850,000,000
Daily average crude requirements	2,330,000
Total refinery crude requirements	850,000,000
Other consumption and exports	50,000,000
Total demand	900,000,000
Imports	40,000,000
Domestic crude required	860,000,000
Indicated total demand (domestic crude)	860,000,000
Supplied from storage	30,000,000
Net production limit	830,000,000
Daily average production limit	2,275,000

Table 2—Gasoline Demand Forecast—1932

(Thousands of Barrels)

	Indicated Domestic Demand	Probable Exports	Total Demand	Cumulative Demand
January	24,600	3,347	27,947	27,947
February	25,030	2,970	28,000	55,947
March	30,630	3,715	34,345	90,292
April	31,787	3,515	35,302	125,594
May	36,660	3,038	39,698	165,292
June	37,938	3,435	41,373	206,665
July	39,582	4,320	43,902	250,567
August	39,886	4,104	43,990	294,557
September	38,273	4,060	42,333	336,890
October	34,772	2,472	37,244	374,134
November	33,582	2,264	35,846	409,980
December	33,435	2,760	36,195	446,175
Total	406,175	40,000	446,175	.....

barrels. Table 2 gives some idea of what the industry can expect in the way of gasoline demand this year, allocated on a monthly basis. With this forecast as a foundation, the writer has projected the economic limit of refinery crude runs on a monthly basis. It will be noted that January and February rates of throughput should not exceed 2,040,000 and 2,085,000 barrels, respectively. This is considerably less than the rates indicated by refinery runs reports for the first half of January. Domestic crude required by refineries this year is not expected to exceed 2,221,000 barrels, although the total requirements of refineries will probably amount to 2,330,000 barrels. Provision has been made, therefore, to expect an influx of foreign oil to the extent of at least 109,000 barrels a day.

Table 3 projects indicated normal refinery crude requirements on a monthly basis for this year.

Table 4 projects the demand for crude a step further, by showing the probable monthly demand for crude, divided as to domestic and foreign sources of supply. This gives some idea of the course of probable demand this year, showing the daily averages for each month and on a quarterly basis. A guide to normal production quotas for 1932 is presented in Table 5, wherein provision has been made on a monthly basis for a normal reduction in stocks. It is seen from these facts that production of the United States for the first quarter of the year should not exceed 2,133,000 barrels. At this rate, actual production for the week ending January 16 was only slightly above indicated normal.

Of particular interest to the producer at this time is the data projected in Table 6 which shows by leading producing states the normal production limits defined by this year's demand outlook. Here, as in the preceding tables, provision has been made for a normal stock reduction, arriving at a net figure representing the production limit for each state and the daily production limit for this year. This table has been used as a basis for comparing each week's production as reported in THE OIL WEEKLY'S market section. In the market section of this issue there is shown a table which allocates state demands and production limits on a quarterly basis. It shows that the production limit for Texas is 818,000 barrels a day; Oklahoma, 435,000 barrels; California, 456,000 barrels; Kansas, 90,000 barrels; Louisiana, 54,000 barrels; Arkansas, 38,000 barrels and Balance of United States, 202,000 barrels. It is believed that the limits set up in Table 5, for each state, represent a fair allocation of prospective demand and normal withdrawals from storage for this year. At any rate, if an effort is made to maintain production at the rates indicated, there is every likelihood that the industry will be able to show economic progress this year.

Producers have made a creditable showing in the opening weeks of 1932, by reducing production through co-operative efforts. The fact that current production is practically down to the limits prescribed by this year's demand outlook, indicates that sound progress in the direction of economic stability is being made. About the only unfavorable factor remaining in the oil situation now is the continued excessive rate at which crude oil is being processed at refineries. Runs to stills for the week ending January 16 amounted to a daily average of 2,208,000 barrels, whereas the economic limit for the month of January is shown in Table 3 at a daily average of 2,040,000 barrels. It is this excessive rate of refinery throughput that has persistently defeated efforts of the producer to benefit from his improved statistical position.

On the whole, the outlook for this year cannot be said to be disappointing, since the demand for crude is actually 10,000,000 barrels above the actual domestic production of last year. If the industry determines to effect a further reduction in excessive crude stocks this year, it should not be difficult for each major producing area to set production quotas at the rates shown in the accompanying tables. In fact, production of the United States need only be curtailed 20,000,000 barrels under last year's actual output to attain the desired degree of equilibrium indicated as necessary. The immediate course of the industry's economic status rests almost entirely with the refiner. If still runs are curtailed to the limits indicated herein, there is every reason to believe that 1932 will prove to be the turning point for the oil industry. The immediate course of the crude oil market depends largely upon the ability of refiners to maintain the supply of gasoline at a rate conducive to improved market values. When the gasoline market reflects such improvement, the producer will be in a position to benefit from curtailment efforts.

Table 3—Refinery Crude Requirements—1932

(Thousands of Barrels)

	Domestic Crude	Foreign Crude	Total	Daily Average
January	60,250	2,975	63,225	2,040
February	57,700	2,800	60,500	2,085
March	65,580	3,240	68,820	2,220
April	68,250	3,370	71,620	2,385
May	70,900	3,500	74,400	2,400
June	70,000	3,500	73,500	2,450
July	73,550	3,630	77,180	2,490
August	75,450	3,675	79,125	2,552
September	72,550	3,645	76,195	2,540
October	67,350	3,325	70,675	2,280
November	65,500	3,240	68,740	2,290
December	62,920	3,100	66,020	2,130
Total	810,000	40,000	850,000	2,330
Daily Average	2,221	109	2,330	.....

Table 4—Crude Oil Demand—1932

(Thousands of Barrels)

	Indicated Total Demand	Probable Imports	Net Domestic Crude Required	Daily Average	Quarterly
January	66,920	2,975	63,945	2,065	
February	64,050	2,800	61,250	2,110	2140
March	72,850	3,240	69,610	2,245	
April	75,800	3,370	72,430	2,415	
May	78,775	3,500	75,275	2,425	2438
June	77,820	3,500	74,320	2,475	
July	81,885	3,630	78,255	2,525	
August	82,690	3,675	79,015	2,550	2558
September	81,740	3,645	78,095	2,600	
October	74,850	3,325	71,525	2,300	
November	72,740	3,240	69,500	2,320	2256
December	69,880	3,100	66,780	2,150	
Total	900,000	40,000	860,000	2,356	

Table 5—Economic Crude Production Limit—1932

(Thousands of Barrels)

	Indicated Domestic Crude Demanded	Supplied From Storage	Net Production Required	Daily Average (Quarterly)
January	63,945	2,230	61,715	
February	61,250	2,125	59,125	2133
March	69,610	2,425	67,185	
April	72,430	2,500	69,930	
May	75,275	2,600	72,675	2351
June	74,320	2,580	71,740	
July	78,255	2,900	75,355	
August	79,015	2,740	76,275	2508
September	78,095	2,700	75,395	
October	71,525	2,500	69,025	
November	69,500	2,400	67,100	2227
December	66,780	2,300	64,480	
Total	860,000	30,000	830,000	2273

Table 6—Allocation of Indicated Crude Demand and Production Requirements 1932

(Thousands of Barrels)

	Indicated Total Demand	Daily Average	Desired Stock Reduction	New Production Required	Daily Average
Arkansas	16,050	45	1,400	14,650	40
California	183,300	500	4,200	179,100	490
Kansas	38,100	100	2,500	35,600	98
Louisiana	24,800	70	3,200	21,600	60
Oklahoma	181,500	495	8,000	173,500	475
Texas	334,150	915	9,000	325,150	890
Balance of U. S.	82,100	225	1,700	80,400	220
Total	860,000	2,350	30,000	830,000	2,273

South American Production Declined Ten Per Cent

By ROY E. LEIGH
Associate Editor

▼ ▼ ▼

IF critics of the South American oil industry would first put their own houses in order before assuming an attitude of hostility toward Venezuelan oil, there would be no problem of over-production in the Western Hemisphere," said William Green, vice-president in charge of production, Lago Petroleum Corporation, when interviewed by a representative of THE OIL WEEKLY.

"Proponents of a tariff on foreign oils must recognize that restriction of surplus is essential to the rehabilitation of the industry. Let them, therefore, who seek to stifle the Venezuelan section of the industry first restrict their own output to the same degree as has already been accomplished in that country. Then their problem will be solved.

"Its solution will not be found in a tariff, however, so long as the United States continues to produce more oil than is required for the domestic market. There is no power on earth, in the United States congress or elsewhere, which can prevent the utilization of oil once found, if accessible to tidewater. If Venezuelan oil can not be sold in its logical markets along the Atlantic seaboard, then it must displace American exports elsewhere.

"Since the meeting of the Oil States Governors' Advisory Committee with the Oil Conservation Board in Washington in April, 1931, when domestic producers and importers both agreed to a program of curtailment, imports have dropped 13 1/3 per cent. Domestic production has increased 5¾ per cent."

▼ ▼ ▼

SOUTH American crude oil production showed a total decline of more than 10 per cent during 1931, as compared to output during the peak years of 1929 and 1930. Venezuela—the only country where competitive drilling conditions exist—showed a decrease of more than 15 per cent, which is attributed to restrictive measures practiced by Venezuela Gulf Oil Company, Venezuelan Oil Concessions, Ltd. (Royal Dutch-Shell), and Lago Petroleum Corporation. As a matter of fact, all of the companies operating in South America, including Shell subsidiaries operating in non-competitive areas, and subsidiaries of Imperial Oil, Ltd. (S. O. N. J.), operating in Colombia and Peru, exercised a high degree of restraint throughout the year, without which this favorable showing could not have been accomplished.

It is worthy of note that South America produced about 20½ million barrels less during 1931 than during the preceding year, and that the percentage of decrease was approximately twice as great as in the United States.

The only substantial increase of the year was shown in Argentina, a non-exporting country whose indigenous production supplies only about half of domestic requirements. Trinidad, British West Indies, enjoying a favored position within the British preferential tariff wall, was able to achieve a normal increase of approximately 600,000 barrels. Ecuador also showed a normal increase in output, which, however, was so small in volume as to be without significance in the world market.

Insofar as the future can be measured by factors now operative, it appears that the statistical trend during 1932 will be similar, in general, to that recorded below:

	1930	1931*
Venezuela	137,671,000	118,767,000
Colombia	20,346,000	18,408,000
Argentina	8,910,000	11,500,000
Peru	12,458,000	9,400,000
Trinidad	9,120,000	9,745,000
Ecuador	1,559,000	1,755,000
Total	190,064,000	169,575,000

*Preliminary figures, subject to official revision.

Mexico, whose statistics are here recorded for consideration in the same connection, showed an accelerated decline of 17 per cent, output having fallen from 39,530,000 barrels in 1930 to 32,783,000 barrels in 1931.

Venezuela's First Drop

Venezuela suffered the first satistical set-back of its career as an oil-producing country when the annual output declined from the peak of 137 million barrels per annum, established during 1929 and maintained during 1930, to a figure of 118¾ million barrels during 1931. Venezuela is capable of producing more oil than Russia at the present time, or at any time in the near future; but restrictions accepted by Venezuelan producers and evaded—or not even considered—by the Soviet oil industry caused the South American country to lose position as the second oil-producing nation of the world. This position was lost during 1930 and is not likely to be regained during 1932.

Partisans of Venezuela claim that, if the oil industries of Russia, Roumania, and East Texas were as well stabilized with respect to market outlets as are those of Venezuela, Colombia and Peru, there would be no problem of overproduction.

It is probably true that Venezuela is safely past the competitive stage. Certain competitive areas remain to be drilled; but it is unlikely that their development will be resumed until there is an actual demand for their production. Nor does it seem likely that Venezuelan oil will ever be raised to the surface to be marketed at uneconomic price levels. Self-interest forbids the sale of this oil below cost, and none of the companies operating along the lake-

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shore is ever likely to be forced to sell oil under conditions of distress.

The price point at which Venezuelan oil will be withdrawn from export competition was indicated during the summer of 1931, when Maracaibo crude was displaced by distress oil from East Texas in certain Caribbean refineries and, to a very considerable extent, in the markets of Europe. The possibility of a resumption of an unrestrained flood of oil from East Texas operates, in conjunction with the threat of an embargo on foreign oils entering the United States, to obscure and becloud the future of Venezuela. Many questions are asked on behalf of supply men, engineers, field men, and others regarding the probable date on which drilling may be resumed in the Maracaibo basin. Such questions are difficult to answer, but they seem to hinge upon the larger questions of East Texas and the tariff.

A survey of the situation reveals no large-scale plans for 1932 on the part of any of the companies operating in that territory. There will be the usual modicum of wildcat drilling by those who look beyond the term of the current depression; a certain amount of reparation and clean-out work; and, perhaps, a minimum of drilling to increase reserves during the latter part of the year. Production activity probably will be continued on routine basis, looking toward the ultimate electrification of the entire lake-shore district, and including the installation of pumping and gas-lift equipment.

Substantial progress, however, was made during 1931 in directions other than statistical. The most important development of the year was the southward extension of the proven area by about 14 miles along the lake-shore, giving it an over-all length of approximately 44 miles from north to south. These extensions, of which there were two, are credited to Venezuela Gulf Oil Company, whose Lagunita 2 had an initial production of 650 barrels of 17° oil, depth 4333 feet, while Lagunilla 1 made 1200 barrels of 10.7° oil per day from 5322 feet.

Standard Oil Company of Venezuela brought in a new field at Puerto Cumarebo, on the north coast, under conditions which will permit of its immediate exploitation. Production is had from shallow depths, ranging from 600 to 1860 feet; but its most important feature is its very high gravity, ranging from 40 to 49° A. P. I. Five producing wells have been drilled on a fold which has been proven over a length of approximately one mile.

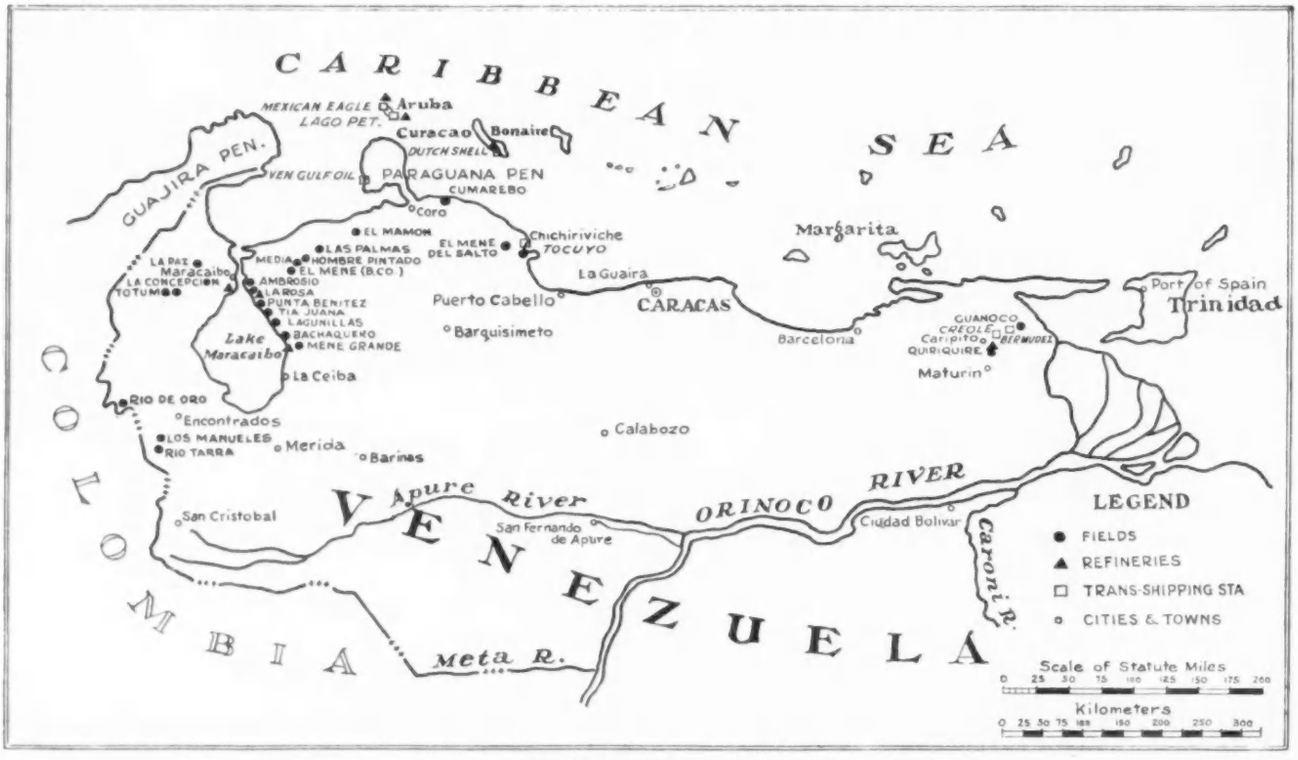
Colon district, south of Maracaibo Lake, concerning which it might be said that there has been no boasting on the part of Royal Dutch-Shell interests, emerged during 1931 as a field of the first rank. It was brought out in testimony before the House Committee on Ways and Means that the Colon district embraces "about 120 miles of anticline, oil-producing anti-cline." Three wells of gusher calibre were completed in the Los Manueles field, in this district, during 1931, which served to focus attention upon it as an area of the utmost future importance. Production is substantially in excess of pipe line facilities, and there is no indication of any intention to increase its transport capacity.

La Concepcion, west of the lake, is another field which has been too lightly regarded in years gone by. The productive area has been extended to the northeast, but its ultimate limits have not yet been found.

Quirequire Extended

Quirequire, in eastern Venezuela, is another field whose productive capacity became better known during 1931 and whose reputation is likely to be enhanced further during 1932. The proven area was extended to the north, northeast, and west during 1931, no drilling having been done to the south. Forty-five wells have been drilled. It is understood that exploratory drilling will be continued throughout 1932, not only in the immediate vicinity of the area now proven but also in the outlying regions. Standard Oil Company of Venezuela, owner of the Quirequire field and prominently identified with unitized properties surrounding it, is now engaged in drilling a very important test at Pedernales, on the east coast.

West India Oil Company, South American marketing subsidiary of Standard Oil Company of New Jersey, recently



Oil Fields of Venezuela

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completed a 2000-barrel topping plant at Caripito, terminus of the pipe line serving the quirequire field.

Trinidad

Trinidad oil producers expect to reap further benefits during the year from the campaign of political and economic propaganda now being carried on throughout the British empire, particularly in the United Kingdom and colonial markets.

The situation does not seem to warrant any notable revival of field activity in Trinidad, but these political factors may operate to prevent any retrocession on the part of the local oil industry during 1932.

The fondest hope of local producers is that pending British tariff legislation will afford them protection in the home markets of the United Kingdom, such as they now enjoy in the West Indian, Central and South American colonies.

Colombia

The flare-up of the Barco controversy in Washington may, if it has any serious repercussions in Colombia, tend to prevent or retard the further modification of the national petroleum law, without which progress in oil is impossible —outside the boundaries of the de Mares and Barco concessions. It also is possible that this flare-up may jeopardize certain delicate negotiations now in progress between concessionnaires under the amended concession and royalty owners under the original grant to General Barco. Assuming the success of these negotiations, however, it is to the Barco that one must look for the next renewal of drilling. Other concessions are involved in litigation growing out of the current petroleum law.

Peru

International Petroleum Company, Ltd., and Lobitos Oilfields, Ltd., are pursuing the even tenor of their way, with all their fields under wraps, and with output gauged to the requirements of their respective market outlets. International is producing something over 20,000 barrels per day, and Lobitos a little over 6000. Drilling activity has been reduced to a leisurely pace, for the maintenance of reserves, with no prospect of change until world conditions improve.

Argentina

Local post-revolutionary conditions and world economic conditions operated to retard what might have been a much more rapid rate of progress in Argentina during 1931. Argentina is the one oil-producing country of South America whose local industry has room for expansion within its own national boundaries. This condition is reflected in a substantial increase in production last year, which may safely be repeated this year.

Intervention by the federal government in negotiations between the Providence of Salta and certain oil companies represented there indicated that the present administration has not yet divested itself of all of the fetishes of the Irigoyen regime; and, until that is done, the Argentine oil industry cannot be expected to attain its full stride. The problem which the Argentinos have yet to settle for themselves is that of whether the oil industry shall be permitted to advance under private enterprise or stagnate under political rule.

Meanwhile, their import demands continue to remove a certain volume of oil from distressed international markets; so it is perhaps just as well, in the larger view.

Bolivian and Other Interior Fields

There appears to be no immediate prospect of any arrangement which would permit the exploitation of oil lands in southeastern Bolivia; so it is probable that these fields will not emerge from the exploratory phase during 1932. Meanwhile, Standard Oil Company of Bolivia (New Jersey) continues on its program of exploratory drilling, but on very reduced scale. A small refinery has been built to supply local needs, which are very limited, as the mountain barrier prevents oil from this source from reaching the country's chief consuming center, around La Paz.

It is probable that other deposits indicated by seepages and other evidences in the hinterlands of Bolivia, Peru, Ecuador and Colombia will have to be permitted to lie fallow throughout 1932, or until the end of the present economic cycle.

VENEZUELAN PRODUCTION RECORD

State or District Field	Total Prior to 1930	1930	1931[1]	Cumulative Total Through 1931
Bolivar Coast, State of Zulia—				
Ambrosio	12,045,000	3,375,000	461,000	15,881,000
La Rosa	111,539,000	24,992,000	20,734,000	157,265,000
Punta Benitez	3,102,000	230,000	37,000	3,369,000
Tia Juana	24,000	4,000	0	28,000
Lagunillas	170,100,000	75,504,000	66,622,000	312,226,000
Bachaquero	0	0	17,000	17,000
Total, Lakeshore District	296,810,000	104,105,000	87,871,000	488,786,000
Other Fields in the State of Zulia—				
Mene Grande	67,102,000	21,067,000	12,000,000	100,169,000
Rio Tarra	729,000	4,920,000	4,971,000	10,620,000
Los Manueles	0	267,000	3,255,000	3,522,000
Totumo	122,000	10,000	14,000	146,000
La Paz	1,339,000	338,000	650,000	2,327,000
La Concepcion	1,808,000	3,301,000	4,602,000	9,711,000
Amana	20,000	4,000	0	24,000
Netick	4,000	1,000	3,000	8,000
Los Barrosos	96,000	0	0	96,000
Total, Other Fields	71,220,000	29,908,000	25,495,000	126,623,000
Total, State of Zulia	368,030,000	134,013,000	113,366,000	615,409,000
State of Falcon—				
El Mene-Buchivacoa	12,691,000	1,903,000	1,791,000	16,385,000
Hombre Pintado	65,000	27,000	24,000	116,000
Las Palmas	33,000	28,000	115,000	176,000
El Mamos	116,000	84,000	26,000	226,000
El Mene del Salto	37,000	217,000	202,000	456,000
Cumarebo	0	0	24,000	24,000
Total, State of Falcon	12,942,000	2,259,000	2,182,000	17,383,000
Eastern Venezuela—				
Quirequire	95,000	1,150,000	3,153,000	4,398,000
Guanoco	1,560,000	249,000	66,000	1,875,000
Total, Eastern Venezuela	1,655,000	1,399,000	3,219,000	6,273,000
Grand T'l Venezuela	382,627,000	137,671,000	118,767,000	639,065,000

[1]These figures include estimates for the month of December, 1931.

RECORD OF WELLS DRILLED TO DATE—VENEZUELA

Field—	Total Drilled Prior to 1930	1930	1931	Total Drilled to Dec. 31, 1931
Bolivar Coast, State of Zulia—				
Ambrosio	105	20	0	125
La Rosa	646	114	25	785
Punta Benitez	45	2	2	49
Tia Juana	7	2	0	9
Lagunillas	497	115	3	609
Bachaquero	0	0	3	3
Total, Bolivar Coast	1,294	253	33	1,580
Other Fields in the State of Zulia—				
Mene Grande	198	37	5	240
Rio Tarra	50	26	4	80
Los Manueles	2	2	3	7
Totumo	14	0	0	14
La Paz	26	4	1	31
La Concepcion	65	16	19	100
Amana	1	0	0	1
Netick	1	0	0	1
Los Barrosos	5	0	0	5
Total, Other Fields	362	85	32	479
Total, State of Zulia	1,656	338	65	2,059
State of Falcon—				
El Mene-Buchivacoa	263	20	10	293
Hombre Pintado	5	0	0	5
Las Palmas	10	5	3	18
El Mamos	4	2	1	7
El Mene del Salto	30	12	22	64
Cumarebo	0	0	6	6
Total, State of Falcon	312	39	42	393
Eastern Venezuela—				
Quirequire	14	22	9	45
Guanoco	20	2	0	22
Total, Eastern Venezuela	34	24	9	67
Grand Total, Venevuela	2,002	401	116	2,519

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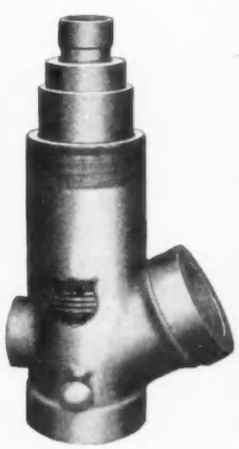

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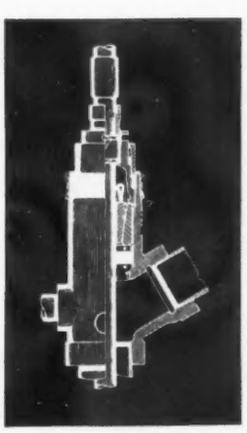
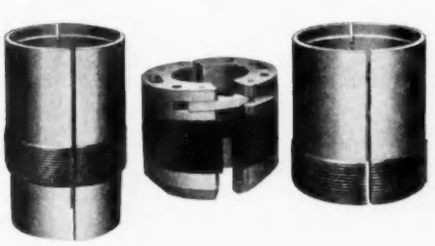
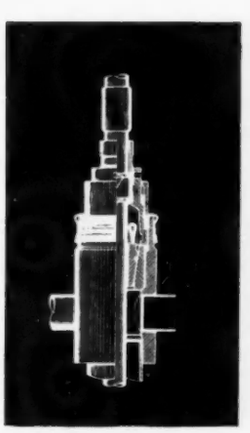


BLOWOUT PREVENTER

D-1 Gland Packing F-1 Gland





THE NATIONAL SUPPLY COMPANIES

German Oil Industry Advanced During 1931

By ROY E. LEIGH
Associate Editor

GERMAN oil operators, taking stock at the year-end, look upon the year 1931 *as marking an important epoch in the growth and progress of their industry, a period in which:*

(1) *A new production record was established;* (2) *a new and fertile oil field was discovered; and, by means of this discovery a new and deeper oil-bearing stratum was opened;* (3) *three old producing fields were extended; and, as a result of these discoveries and extensions a reserve of production was established which assures that output can be doubled during* 1932*; and* (4) *not only that, but* 1931 *brought about the entry into Germany of Royal Dutch-Shell, H. L. Doherty, and other foreign interests, whose preliminary operations have resulted in a more general adoption of rotary equipment in one of the last-remaining strongholds of percussion tools.*

IT has been said that the New Year found the German oil industry standing at a technical cross-road; and that decision may be made during 1932 as to whether the producers of the next decade will continue to employ percussion equipment or switch, in part, to oil mining or rotary drilling. Partisans of the old-established European drilling methods have pointed out with courteous subtlety that German engineers tested and abandoned a rotary method long years before a similar idea was conceived in the United States; and that, with all the rotaries now operating in Germany, not one can yet be credited with any discovery of economic importance.

On the basis of evidence available to an average German operator, the rotary is still an unproved foreign innovation. If one or another of the rotary crews now employed in that country should happen to bring in a new oil field during 1932—as several of them hope to do—then the "swivel-necks" might conquer Germany as quickly as they did Roumania, under similar circumstances. On the other hand, if current enthusiasm should subside with no important discovery creditable to rotary, German drillers probably would resume the even tenor of their way, no doubt with a feeling of complacency.

The battle between the entrenched "jar-heads" and the invading "swivel-necks" in Germany probably will not differ in its essentials from those which raged in California, Oklahoma, and elsewhere. It is the economic test, and not technical evidence, which will determine the choice of drilling equipment in Germany as elsewhere.

Oil Mining

Meanwhile, however, German engineers are progressing beyond the experimental stage in the development of a radically different method of oil production, the ultimate possibilities of which for the present are obscured to American engineers by reason of the great over-supply of oil. It has been said that, at some future time, if and when a shortage of oil occurs in this country, American oil producers of that day may have cause for gratitude to German and French technologists of this day who are proceeding with the development of underground mining methods.

The year 1931 brought about an extension of this method, which promises a higher percentage of recovery than any other production method now in use. It was by accident that oil was discovered in the subterranean workings of Burbach Potash Company, in Thuringia, and it was fortunate that the company had its shafts and galleries ready made and in proper position with reference to the oil reservoir for the adoption of the method perfected at Pechelbronn[1].

The presence of oil in a dolomite occurring in the lower part of the Middle Zechstein (Upper Permian) was disclosed by a seepage of oil into the potash workings, whereupon the potash company became also a producer of oil, employing the tools at hand, which were those of routine mining.

The oil-bearing formation lies about 50 meters (154 feet) below the gallery at a depth of 1000 meters (3280 feet), and it is through the floor of this gallery that holes of about two inches in diameter are drilled by pneumatic percussion tools into the pay zone below. Four wells, slanting downward in as many different directions, are drilled from each position or set-up of the pneumatic equipment. A large number of such wells have already been drilled; and production from this source now exceeds 3000 barrels per day, the output being sold to the Leuna refinery of the I. G.-Farbenindustrie.

The old galleries are now being extended so as to permit of further drilling underground; and the I. G.-Farbenindustrie proposes to expand its refining facilities so as to supply a greater portion of the country's requirements for petroleum products, provided the government will assure the retention of existing protection against foreign oils.

Nienhagen, Edemissen, and Oberg Extended

The productive capacity of the Nienhagen field, in the Province of Hanover, was materially increased during the year; but actual output has been restricted awaiting the completion of additional refining facilities. This field was extended a distance of three quarters of a mile to the west by Anton Raky, a veteran European operator, who found the sand at a depth of 1300 meters (4264 feet) or thereabout in his Aue 1. Further extensions of about 200 yards were made by the Elwerath company, whose three extension wells have an aggregate capacity of 4500 barrels per day. Another extension is now being sought in a test well

[1]See The Oil Weekly, August 1, 1930 issue, "French Mining Method Points Way to Complete Recovery."

which is being drilled at a distance of about one-half mile beyond the Elwerath wells.

The Edemissen field, on the Oelheim Dome, purchased by the Preussag organization from Anton Raky for a consideration of 8,000,000 marks, is said to be capable of producing around 2000 barrels of oil per day. Two new wells recently completed in this area are said to be good for 700 barrels each; but all of this production is shut in awaiting the completion of the Elwerath refinery, which plant is under construction by an American engineering firm, Arthur G. McKee & Company, and is scheduled to be put in operation about January 15.

The Oberg field also has been extended about a half mile to the north by drilling done by the Ebag company, which is said to find 300-barrel flowing wells in the extension area.

Foreign Entrants

The entrance into Germany of Royal Dutch-Shell interests, who have already expended some $2,500,000 for acreage, geophysical surveys, and prospect drilling, is regarded as one of the most significant events of the year. The Shell's German subsidiary took over about 1,000,000 acres in the Province of Oldenberg from the North European Oil Corporation, since which time additional lands have been acquired around the Wietze Dome and in the region north of the town of Celle. Shell is getting a play on its Wietze acreage through the drilling of a deep test on that dome by the Deutsche Petroleum Aktien-Gesellschaft, which is the largest oil company in Germany. Heavy rotary equipment manufactured by National Supply Company is being used with the intention, it is said, of drilling to a depth of 2000 meters (6560 feet). Latest reports indicate that this test has already reached a depth of 1400 meters (4600 feet).

The first well drilled by the Shell subsidiary on the Jaderburg Dome, purchased from North European Oil Corporation, struck the top of the salt and was abandoned. The second well was abandoned on reaching a marker in the Miocene, and a third well is now being drilled in search of this same marker at another location nearby. It is said to be the intention of the company to drill a series of such geological test holes in order to map the contours of the dome, and then to undertake the drilling of a deep test to a depth of 5000 to 6000 feet.

The same company is also making core tests on a structure mapped by torsion balance survey in Mecklenberg. Meanwhile, a comprehensive program of torsion balance work is also being carried out, with eight balances in operation, in the provinces of Mecklenberg and Hannover.

Dr. O. Dreher, a German veteran of many campaigns in Mexico, Roumania, and the United States, is in general charge of operations for the Royal Dutch-Shell group. His company has several rotary outfits on hand, one of which is in service at Jaderburg. Its coring is being done by diamond drills, of which there are two in operation at the present time.

North European Oil Corporation has drilled two test wells on the Zwischenahn Dome and is said to be planning the commencement of a concentrated drilling program around the Sottor Dome, near Hamburg, where an earlier well yielded oil in small quantities from the top of the cap rock.

Cities Service Oil Company is drilling in the third of a series of wells on the east side of the Sehnde-Lehrte Dome, near Hanover, where two previous tests yielded showings of oil and gas. The current test has reached a depth of 1000 feet or more. A Sullivan diamond drill is being used.

The discovery of oil in Thuringia brought on an active leasing campaign in the Thuringian Basin, the geology of which is said to be similar to that of the Permian Basin of West Texas. Cities Service and Shell are said to have taken up large blocks in this territory, and another large American company is said to have made a committment likewise.

J. Elmer Thomas, who is said to represent John Hays Hammond, of New York, has taken a concession on all lands lying south of the Danube, in the state of Bavaria, where an extensive geophysical campaign is now under way.

North European Oil Corporation has acquired a concession on the Free State of Wurttemberg, in southern Germany, plus, also, lands totaling 200,000 acres in Ostfriesland, between Oldenberg and the Dutch frontier. The company is operating six torsion balances and one magnetometer in this area, where it is said to have found four salt domes.

Certain individual American citizens are also reported to be holding and acquiring lands near Hamburg.

A French group has recently established headquarters at Hanover, with the plan, as reported, of merging or acquiring control of several small German oil companies and of commencing an extensive campaign of leasing and exploration.

Current dispatches from Berlin relate to the organization of a new company having a capitalization of 14,000,000 marks ($3,318,000 at current exchange), with officers and directors named as follows: Konsul Bierbauer, of Berlin; Dr. W. Drauch, Hanover; Arthur von Hunnis, Berlin; Jos. Emil Roos, Berlin; Dr.-Ing. K. Sachtleben, Berlin; Herr Siebert, of Hamburg. It is said to be the plan of this new company to build a cracking plant at Hanover.

The completion of the new refinery owned jointly by Elwerath, Winterschall, and Preussag, together with extensions and increases of refining capacity by I. G.-Farbenindustrie and others, may open up a new chapter in the history of the German oil industry, as it will then be possible to increase the output from wells now pinched in or shut in.

The opening up of this new plant and these new wells may cause a profound alteration of the competitive situation. Distributors of imported products heretofore have enjoyed a large share of the market; but an increase of domestic production under the protection of Germany's high tariff on petroleum may give an advantage to the sellers of indigenous oils. The greatest fear of local interests, and of foreign companies contemplating entrance upon the local scene, is that consumer influence may bring about a lowering or abolition of import duties after Germany becomes self-sustaining in petroleum. The I. G.-Farbenindustrie has sought to "freeze" tariffs at present rates,[2] in order to forestall any such change. This major German enterprise has sought assurance from the government on this point before commencing the further enlargement of its refinery.

Companies now participating in the German market include Royal Dutch-Shell, Standard Oil Company of New Jersey, Sinclair Consolidated Oil Corporation, Anglo-Persian, and "Derop," the latter a subsidiary of the Soviet Naphtha Syndicate. The "Derop" enterprise succeeded in increasing its share of the market's requirements during 1931, and Sinclair has assumed a commanding position along the Rhine. The Shell and Standard subsidiaries share in the ownership and output of a local refinery; and it is considered possible that changing conditions may bring about an even closer alliance between these two groups.

Standard Oil Company (Indiana), owner of a small asphalt plant near Hamburg, is known to be negotiating for distribution in Germany, with the evident intention of entering the gasoline market of that country.

[2]The tariff on crude oil is roughly equivalent to $3.40 per barrel, at current exchange.

High Gravity Economics: It Is Too Much Oil

Being the letters of Paul Peebles, P. S. G., to his sweetheart, Cleopatra, at Goose Creek . . . .

My Dear Cleopatra:

Cleo honey I did not write to you last week on account of I was too busy and anyway it was not nothing for me to write to you about on account of all that was happening then was just about to happen and I did not know for sure what was going to happen on account it is kinder uncertain what will happen.

Paul "Hisself"

One reason why I did not come down to see you is on account of the depression. I have stood the depression alright so far on account of it does not seem to make much difference to me, until the slump hit. Since the slump has hit it is so hard that some of the best oil companies is not making no more than six or eight per cent on their investment when they is entitled to at least 25 per cent. Then on the other hand it is some which is losing more money than they ever had. If it was not for their courtesy cards and the third grade to keep track of they would not hardly have nobody in their offices, but like it is they is working nights trying to collect.

But just as soon as I can get me together a tank full of blue gas honey I am coming down to see you again. I have started using blue gas now on account of I have used up three courtesy cards and the companies have started swapping dope. And I don't think that is courteous, the way they tell me to pay up or I can't have no more gas on my card.

BUT they aint so worse as they might be, I guess. You remember I wrote you awhile back that Amos had called the grand lodge to St. Louis on account of Rome was burning? Well last week he called them to come to New York and did not ask them to bring no buckets or fireman's hats. So I guess from that that the fire is out. Amos has quit playing Nero and now is Horatio at the bridge or something. In the meantime Andy was down at Washington proving to a man named Patman that he aint no business man.

FIRST we want to talk about the directors. The big moment in their lives right now is economics and gasoline taxes. I guess you think that economics is something like your maw does when Slim and the rest of the boarders does not pay prompt and she makes hash or makes a whole lot of gravy with a little bit of grease. But that aint it. What these fellows is talking about is petroleum economics and they sure have got them worried. You see the blue gas aint got no profit to it and a whole lot of people is using it. Then somebody up in Pa. got to saying that their oil would run more than 500 miles and along come these guys making refrigerators that dont never change the oil. So a lot of people got to figuring that changing the oil at 500 miles was a lot of bunk and anyway the cars was getting old, so why worry? And now the new model autos is out and selling so cheap that you can run them till they aint got no oil in them and then junk them cheaper than greasing. But them kinds of economics is low gravity.

High gravity economics is like this: It is too much oil. Well the producers hear that plea and they shut in some more wells and start drawing on stocks. Then everybody is happy. They maybe aint getting no money but they is saving the situation. Then the refiners sends in reports that the crude has been made into gasoline. Then it is more gloom. Altogether it aint so much oil as there was but if it is gasoline it is a whole lot worse than crude, and the business is all shot to again. So then the refiners stop running crude and the crude stocks pile up and gasoline goes down again. Aint nobody happy and aint nobody got no money and aint making none.

Really the situation is that the business is short on optimism and long on potentials.

IT is just one thing that looks bright even through the blue gas, and that is that every once in awhile some of the worst broke companies steps in and pays three or four million dollars for producing properties while they is complaining already about having too much oil, and every time a filling station shows symptoms of making the light bill, well a rival company steps in and spends ten or fifteen thousand dollars for a station on the opposite corner. Taken altogether, it is a great life if you don't weaken, but it is good night for them that does.

Just to show how dumb congress is, they is accusing Mr. Mellon of having time to fool with such little matters as the Barco concession. Next thing they will be saying that he personally picks out the sites for all the filling stations the company is building. The truth is he aint even paying enough attention to business to keep his income tax straight, much less to get aluminum used in public buildings.

Meantime the government is slow about doing anything about the Tariff. But Pres. Hoover bought his grand child a toy filling station for Christmas, so I guess he figures there is some future to the business.

If the stockholders is willing, Sinclair and Prairie will get together, and Harry's COC will be among the big ones.

Your Loving Paul.

For Economy Reed Bits

The replaceable wash plate in Reed Type 31 bit heads lengthen the life of those bit heads almost indefinitely, while assuring proper water action on cutters at an economical cost.

Reed Type 31 Bit Head Wash Plate. Perfected jet action on every cutter.

One bridge is in many instances used with more than one set of cutters, materially reducing the cost of each set.

The Husky forged bridge may be used time and again.

Operators in many fields have discovered that the economies possible thru re-use of parts of sets of Reed cutters make those cutters low in first cost. Specific examples upon request.

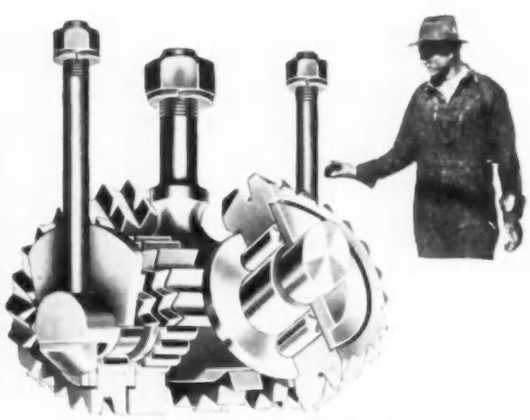
Cross roller pins are in a majority of instances good for usage with more than one set of cutters with consequent saving. And, in many cases, side cutters, cross roller cutters and bearings may be used a second time.

Cross Roller Pin bearing surfaces being greatly protected by roller bearings this pin may be used in many instances a second or third time.

For Safety Reed Bits

Husky wash plate strongly bolted into head with four cap screws.

In the construction of the Reed Type 31 bit head, no stone has been left unturned to increase the safety factor of this bit. The construction, placement and fixity of the husky wash plate is one example.

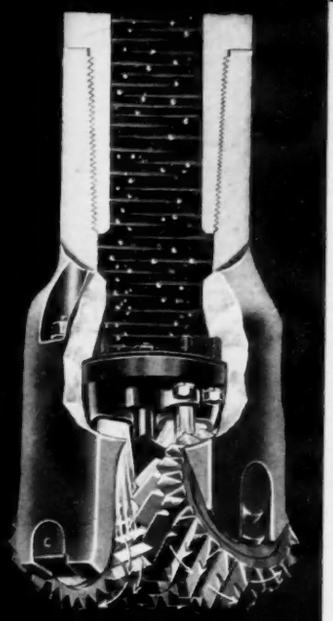


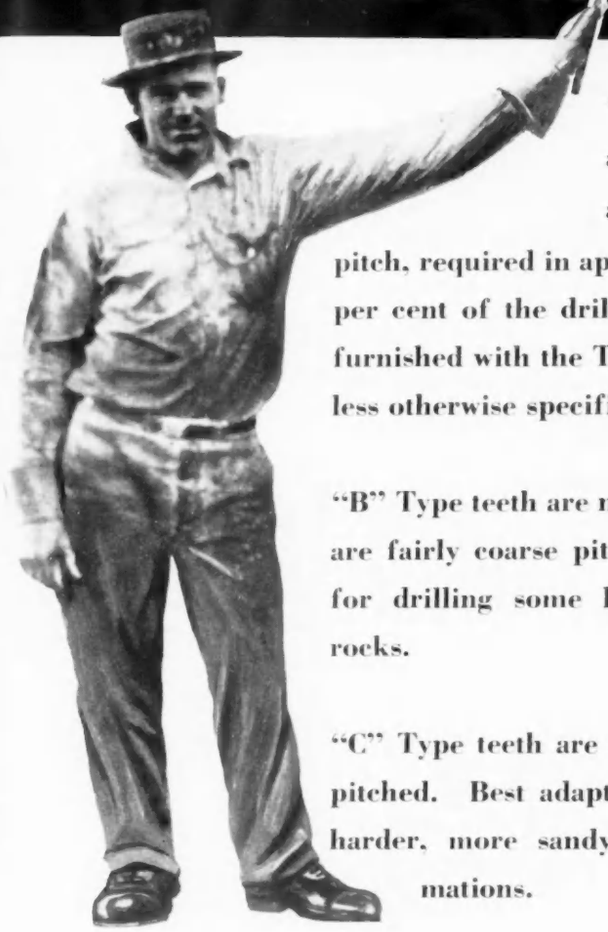
Three husky drop forged bolts up thru bit head hold the cutter assembly securely in place.

The Type 31 unit cutter assembly not only is held in the bit head by cross roller pin but is additionally anchored in place with three thoroughly protected (within the head) drop forged heat treated alloy steel bolts, thus making for maximum safety.

That the safety of this tried and proven bit is unquestioned is manifest by its continuous operation in the hole for eighteen consecutive days and nights without pulling for examination. Details of this and other similar runs upon request.

For Speed Reed Bits





The choice of the proper type of cutter for the formation being drilled has, in many instances, speeded up hole making at a material reduction in cost of hole per foot drilled. Let us give you specific instances.

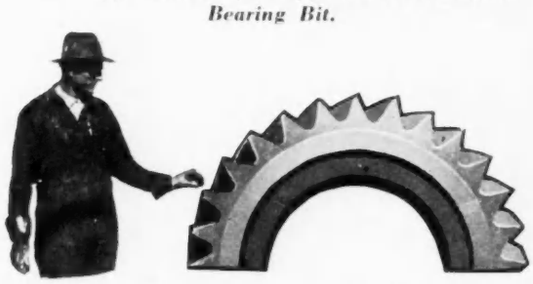
"A" Type teeth are long, sharp and of coarse pitch, required in approximately 90 per cent of the drilling. They are furnished with the Type 31 bits unless otherwise specified.

"B" Type teeth are not as sharp but are fairly coarse pitched. Suitable for drilling some lime and sand rocks.

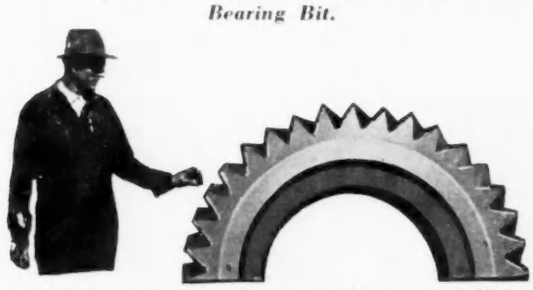
"C" Type teeth are sharp and fine pitched. Best adapted for drilling harder, more sandy compact formations.

"D" Type teeth are designed to cause crushing action rather than chipping action obtained with the other teeth. Suitable for drilling in extremely hard rocks subject to crushing, such as granite.

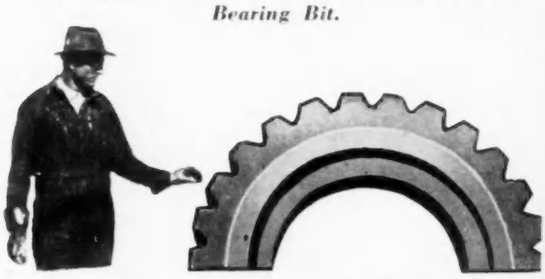
"A" Type Cutters for Type 31 Reed Roller Bearing Bit.



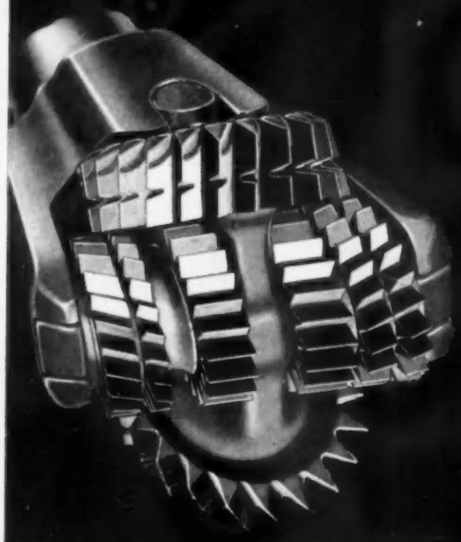
"B" Type Cutters for Type 31 Reed Roller Bearing Bit.



"C" Type Cutters for Type 31 Reed Roller Bearing Bit.



"D" Type Cutters for Type 31 Reed Roller Bearing Bit.



For Results Reed Bits

Reed Type 31 Single and Double Three Point Reamers used with the Type 31 roller bearing bit and the proper type tooth on cutters, assures a maximum efficiency in practically every formation.

From California, Wyoming, Colorado, Oklahoma, New Mexico. Texas, Louisiana, Arkansas and many foreign fields have within the past several months, come records of unusual results secured with the Reed Type 31 roller bearing bit.

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The incorporation of roller bearings in the Type 31 Reed Bit has minimized friction, increased drilling speed, and lowered cost per foot of hole drilled, beyond comparison.

REED ROLLER BIT CO.

HOUSTON LOS ANGELES OKLAHOMA CITY NEW YORK CITY

Crude Output and Stocks Reduced in 1931

Economic Law and Laws of Conservation Played Leading Parts in Reducing Supply

By H. J. STRUTH
Staff Economist

A REVIEW of oil developments of 1931, while fraught with countless disappointments, cannot fail to register the conviction that many of the ills of that period were self-inflicted. At any rate, there can be no denial of the fact that the petroleum industry was one of few so fortunate as to show an increase in demand for its principal revenue-producing product—gasoline. Last year, despite the country-wide depression, there was an increase in domestic gasoline consumption of 1.82 per cent over 1930. While the rate of gain was not in keeping with the average of preceding years, it represents a note of confidence in the popularity of a product which could show a gain in a generally accepted off-year. Yet, despite increased demand, the industry was obliged to sell gasoline at a loss with resultant serious effect upon the year's financial outcome.

That the industry's unsatisfactory results in 1931 were almost wholly the effect of internal disorder is proven by the facts available for that period. On the one hand, the facts show that there was actually some improvement in its statistical position; crude stocks having been reduced substantially in the face of an unprecedented potential supply. On the other hand, a substantial portion of the reduction in above-ground supplies of crude oil is traceable to its conversion into finished products at refineries, only to show up in excessive inventories and a detriment to the industry's market structure. In fact, by weighing supply and demand statistics for 1931 it is apparent that the quantity of crude oil recorded as demand was in reality, in part, an artificial demand that could not be made to sustain a price for crude in like ratio of demand to supply. Thus, while the producer, either through voluntary or enforced curtailment, was able to effect a substantial reduction in stored supplies of crude, excessive conversion of crude into products proved to be a barrier to what otherwise appeared to have been an improved statistical position.

While proration continued to occupy the minds of the industry during 1931, and operated effectively as an agent of curtailment, it was the workings of economic law and legislation against physical waste that played the leading part in bringing crude production to a point well below market requirements. Preliminary figures of crude production for 1931 show that the output of the United States aggregated about 850,101,000 barrels, representing a reduction under the quantity produced in 1930 of 47,910,000 barrels. Incidentally, stocks of crude were reduced during the year to the extent of somewhat more than 47,000,000 barrels, indicating that all of the reduction in stocks was due either to voluntary or enforced curtailment of output. However, some credit for lessened supply must be given to reduced imports, which showed a drop of over 15,000,000 barrels under 1930. At the same time, exports of crude showed a gain over 1930 of nearly 3,500,000 barrels.

Refinery runs of crude showed a decline under 1930 of 33,000,000 barrels; yet, there was an over-production of gasoline that contributed largely to the demoralized market structure of last year. It will be noted, however, that there was a substantial increase in the percentage of gasoline recovery from crude oil during 1931. Table 1 shows, in addition to other salient facts of the industry for last year, that the yield of gasoline from crude oil, excluding natural gasoline and benzol used in blending, rose from 41.98 per cent to 44.29 per cent. This increase in recovery was perhaps the principal factor that created a partial artificial demand for crude oil and resulted in clogging the wheels of the industry's price structure. This was particularly

TABLE 1
Highlights of the Oil Situation in 1931, Compared with 1930

	1931*	1930
World's Crude Oil Production (Bbls.)	1,374,251,000	1,418,734,000
U. S. Crude Oil Production (Bbls.)	850,101,000	898,011,000
Total Crude Oil Demand (Bbls.)	944,331,000	983,424,000
Refinery Crude Runs (Bbls.)	894,000,000	927,441,000
Crude Oil Imports (Bbls.)	47,000,000	62,129,000
Crude Oil Exports (Bbls.)	27,000,000	23,705,000
Wells Drilled	11,716	19,848
Producing Wells Completed	6,618	10,745
Initial Oil Production (Bbls.)	31,590,024	10,443,833
Crude Oil Stocks, Dec. 31, (Bbls.)	465,000,000	512,230,000
Average Value of Crude, per bbl.	$.66	$1.19
Motor Vehicle Registrations, Dec. 31	25,995,000	26,525,000
Domestic Gasoline Consumption (Bbls.)	402,000,000	394,800,000
Average Consumption per Motor Vehicle (Gals.) (a)	643	630
Gasoline Imports (Bbls.)	13,500,000	16,927,000
Gasoline Exports (Bbls.)	46,000,000	65,575,000
Gasoline Yield from Crude (per cent)	44.29	41.98
Gasoline Stocks, Dec. 31 (Bbls)	44,041,000	40,529,000
Stocks All Oils, Dec. 31 (Bbls.)	622,000,000	665,497,000

*Preliminary.
(a) Based on average monthly registrations to total domestic gasoline consumption.

TABLE 2
United States Crude Situation—1930-1931
(Barrels)

	1931*	1930
Stocks January 1	512,230,000	535,514,000
Production	850,101,000	898,011,000
Imports	47,000,000	62,129,000
Total Supply	1,409,331,000	1,495,654,000
Refinery Consumption (a)	892,000,000	922,000,000
Other Domestic Consumption	25,331,000	37,719,000
Exports	27,000,000	23,705,000
Total Demand	944,331,000	983,424,000
Stocks December 31	465,000,000	512,230,000
Withdrawn From Stocks	47,230,000	23,284,000

*Preliminary.
(a) Indicated purchases—not still runs.

true during the latter part of the year, when runs to stills were maintained considerably above normal.

On the quantity of crude oil processed last year, the increased rate of recovery meant an increase in gasoline production of 21,000,000 barrels. As a matter of fact, had still runs been maintained in conformity with market requirements for gasoline, allowing for imports, natural gasoline and benzol, and that part of the stored supply of gasoline shown to be in excess of normal working stocks, the demand for crude oil would have been about 15,000,000 barrels less than was actually consumed.

Table 2 presents a condensed comparison of crude oil supply and demand for 1931 and 1930. Here it is shown that refinery demand for crude amounted to about 892,000,000 barrels, while the total demand was 944,331,000 barrels, against a current supply of 897,101,000 barrels. It is seen, therefore, that 47,230,000 barrels of last year's market requirements were withdrawn from storage. This compares with a storage reduction in 1930 of 23,284,000 barrels. In the January 30, 1931, issue of THE OIL WEEKLY, it was pointed out that a reduction in crude storage of about 34,000,000 barrels was an economic necessity. The reduction was contemplated on the basis of a domestic production of 850,000,000 barrels. The fact that production was maintained at the approximate limit dictated by the facts then at hand, but that stocks were reduced by more than 47,000,000 barrels, is accounted for by an excessive rate of production early in the year and an unprecedented slump during the summer, as a result of the declaration of martial law in Oklahoma and Texas. By shutting off the flow of flush oil in Oklahoma City, Seminole and East Texas, through the exigency of martial law, the daily average crude production of the United States declined from a peak of 2,608,000 barrels to a low point of but 1,746,000 barrels. The greatly lowered rate of production recorded during August and September resulted in the largest withdrawals of crude from storage in the history of the industry.

TABLE 3

United States Gasoline Situation—1931-1930
(Barrels)

	1931*	1930
Stocks, January 1	40,541,000	43,261,000
Production	438,000,000	440,728,000
Imports	13,500,000	16,927,000
Total Supply	492,041,000	500,916,000
Domestic Consumption	402,000,000	394,800,000
Exports	46,000,000	65,575,000
Total Demand	448,000,000	460,375,000
Stocks, December 31	44,041,000	40,541,000
Added to Stocks	3,500,000	.....
Withdrawn from Stocks	.....	2,720,000

*Preliminary.

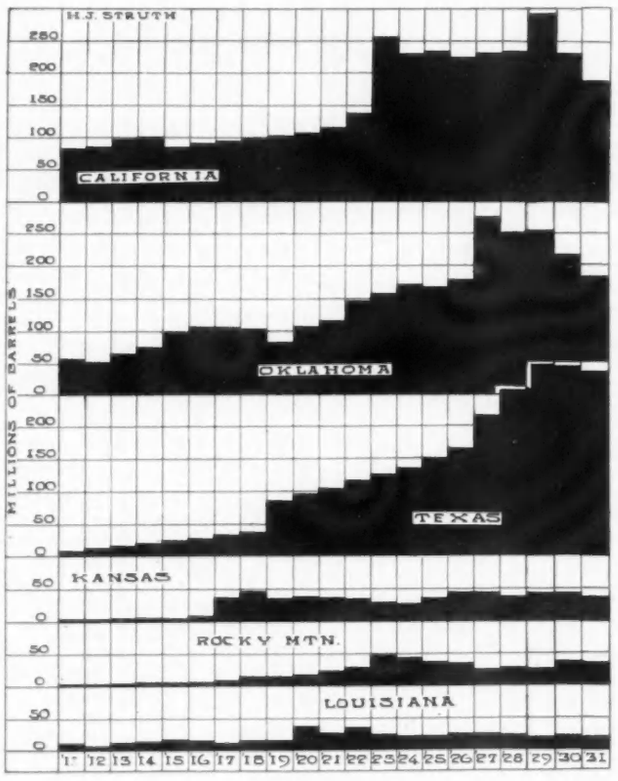


FIGURE 1
Annual Production in Leading States

Table 3 shows what happened to the gasoline situation as a result of excessive processing of crude at refineries. It will be noted that gasoline production was only slightly less than the total produced in 1930, despite the fact that still runs had been reduced to the extent of 33,000,000 barrels under that year. Of favorable influence to last year's gaso-

TABLE 4—Basic Trends

	January	February	March	April	May
Crude Oil Production	65,991,000	60,645,000	69,397,000	73,101,000	80,176,000
Daily Average	2,129,000	2,166,000	2,166,000	2,239,000	2,586,000
Refinery Crude Runs	70,026,000	65,249,000	73,596,000	74,706,000	83,647,000
Daily Average	2,259,000	2,330,000	2,374,000	2,490,000	2,698,000
Imports—all oils	7,954,000	7,700,000	7,780,000	7,620,000	8,587,000
Exports—all oils	12,010,000	9,702,000	8,827,000	9,990,000	11,613,000
Wells completed	1,171	833	841	931	1,125
Average price 36 Grav. Mid-Continent Crude (per Bbl.)	$.95	$.95	$.59	$.29	$.59
Average price U. S. Motor Gasoline F.O.B. Group 3 refineries (Cents per Gal.)	4¼	4	3½	3½	2⅞
Crude Oil Stocks, end of month	508,746,000	503,980,000	499,210,000	497,983,000	495,122,000
Refined Oil Stocks, end of month	152,405,000	153,613,000	156,143,000	157,304,000	165,989,000

*Preliminary. †Lowest point—July 8—18 cents.

TABLE 5
Net Profits—10 Integrated Oil Companies

	1926	1927	1928	1929	1930	1931
Standard Oil Company, (N. J.)	$117,652	$ 40,323	$108,486	$120,913	$42,151	Total
Standard Oil Company, (Ind.)	55,099	30,132	77,337	78,500	46,371	Estimated
Texas Corporation	36,043	20,029	45,074	48,318	15,073	On Basis
Standard Oil Company, (Cal.)	55,122	40,211	46,084	46,633	37,675	Of Market
Standard Oil Company, (N. Y.)	32,777	11,415	39,645	38,751	*40,246	Value of
Gulf Oil Corporation	35,099	13,708	36,325	44,500	10,625	Crude and
Atlantic Refining Company	7,021	2,316	16,849	17,332	2,743	Refined Oils,
Sinclair Consolidated Oil Corporation	17,648	5,391	13,447	16,599	*12,026	Including In-
Pure Oil Company	10,893	4,837	11,224	11,224	2,618	ventory value
Skelly Oil Company	5,691	1,438	4,104	5,786	1,917	Adjustments
Totals	$373,045	$169,900	$398,575	$428,556	$210,445	$34,842

*Includes profit from sale of properties.

line situation was a decline in imported gasoline and an increase in domestic consumption. However, the industry's gasoline exports declined sharply under 1930, showing a loss in volume of more than 19,000,000 barrels. The accumulation of excessive gasoline stocks can be traced back to 1929, when there was an increase of 10,000,000 barrels. What slight improvement was shown in 1930 was more than offset in 1931, when there was an indicated increase in gasoline stocks of 3,500,000 barrels. Thus, the cumulative effect has placed the industry in practically a position similar to that which prevailed at the beginning of 1930; with a serious over-supply of gasoline.

Soldiers Reduce Stocks

The course of events during 1931 are shown by certain basic facts which appear in Table 4. The swings of the production curve and of refinery runs are shown therein. The extent to which martial law affected crude inventories is shown in the course of crude stocks. During August, crude stocks were reduced to the extent of about 14,000,000 barrels, with a further reduction in September of nearly 10,000,000 barrels. It is seen, therefore, that a substantial part of last year's withdrawal from crude storage took place during the period when martial law was in effect; during August and September. On the other hand, stocks of refined oils showed a gradual increase well up into the season of peak demand for gasoline and ended the year with a net gain of 3,500,000 barrels. The course of crude oil prices and the influence exerted upon them by the trend of gasoline prices is effectively shown by this table. The lowest point reached by the posted price of 36 gravity oil in the Mid-Continent area was 18 cents a barrel; on July 8, 1931. During that period, the wholesale price of U. S. Motor gasoline, in Group 3, hovered at from 2¼ to 2¾ cents a gallon. Aside from a sudden up-turn in gasoline prices during August, there was practically no improvement

FIGURE 2
Wells Drilled and Price of Crude.

During 1931—Monthly Statistics

June	July	August	September	October	November	December*
76,513,000	77,961,000	68,418,000	63,636,000	73,079,000	72,851,000	73,526,000
2,550,000	2,515,000	2,207,000	2,121,000	2,357,000	2,428,000	2,372,000
80,747,000	79,758,000	80,672,000	75,094,000	75,675,000	71,367,000	72,354,000
2,692,000	2,573,000	2,602,000	2,503,000	2,441,000	2,379,000	2,334,000
9,794,000	7,023,000	5,926,000	6,894,000	8,045,000	6,183,000	6,300,000
16,765,000	11,756,000	11,580,000	10,112,000	10,446,000	10,517,000	10,250,000
1,012	844	922	848	1,248	1,028	961
$.33	$.26†	$.44	$.62	$.62	$.77	$.77
2¼	2¾	4¾	3½	3⅜	4⅜	2¾
492,768,000	489,935,000	476,135,000	465,688,000	462,000,000	463,079,000	465,000,000
165,845,000	158,415,000	156,361,000	153,739,000	151,599,000	153,273,000	156,500,000

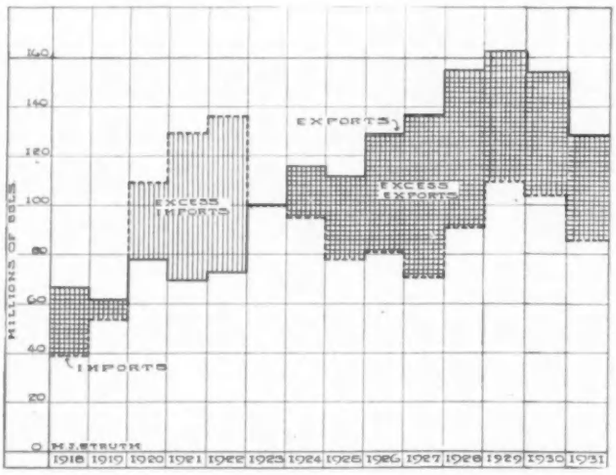


FIGURE 3
Exports and Imports of All Oils.

recorded during last year. This unfavorable situation had an adverse effect upon the general crude market.

The extent to which adverse market conditions affected the financial status of the industry during 1931 is illustrated by the fact that net profits slumped to the lowest levels in its history. Table 5 presents a conception of the probable extent of last year's financial slump, showing the approximate decline indicated for 10 integrated oil companies combined. On the basis of crude and refined product revenues, allowing for the severe adjustments necessary in inventory valuations, it is estimated that the net returns of these 10 companies slumped to the extent of at least $176,000,000 last year. The situation is emphasized by the fact that net profits probably only represented a bare eight per cent of the net profits shown in 1929 and constitute a decline under 1930 of approximately 83 per cent.

The accompanying graphic charts further emphasize the basic changes that were recorded in last year's statistics. Figure 1 shows the effect of enforced production curtailment upon the leading producing states. Oklahoma recorded a production decline under 1930 of about 37,000,000 barrels; California shows a net decline for the year of about 38,000,000 barrels. In fact, with the exception of Texas and the Rocky Mountain area, the decline in crude production was general. In Texas, as a result of developments in East Texas, production registered a net increase over 1930 of about 44,000,000 barrels. This placed Texas in the lead as the nation's largest oil producer, with an annual output of about 273,000,000 barrels. The course of crude oil prices is graphically portrayed in graph on page 41, showing the changes recorded in posted prices of Oklahoma, California and Pennsylvania crude. The effect of declining crude oil prices upon field developments is also shown in Figure 2, bearing out the apparent relationship between the course of drilling and the price of oil at the well. The extent to which the American petroleum industry was favored in foreign trade is shown in Figure 3. It will be noted, however, that the balance in favor of the United States was somewhat narrower than in the several preceding years, indicating that there may eventually be a repetition of the situation which formerly prevailed, where imports exceeded exports. In this connection, however, it is believed that impending barriers to excessive importation will prevent such recurrence. The effect of low prices upon the industry's revenue, despite increased domestic consumption of gasoline, is effectively illustrated in Figure 4.

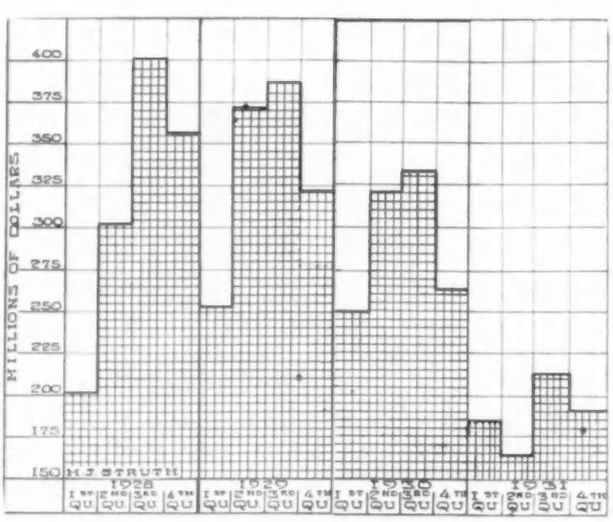


FIGURE 4
Gasoline Revenue by Quarters.

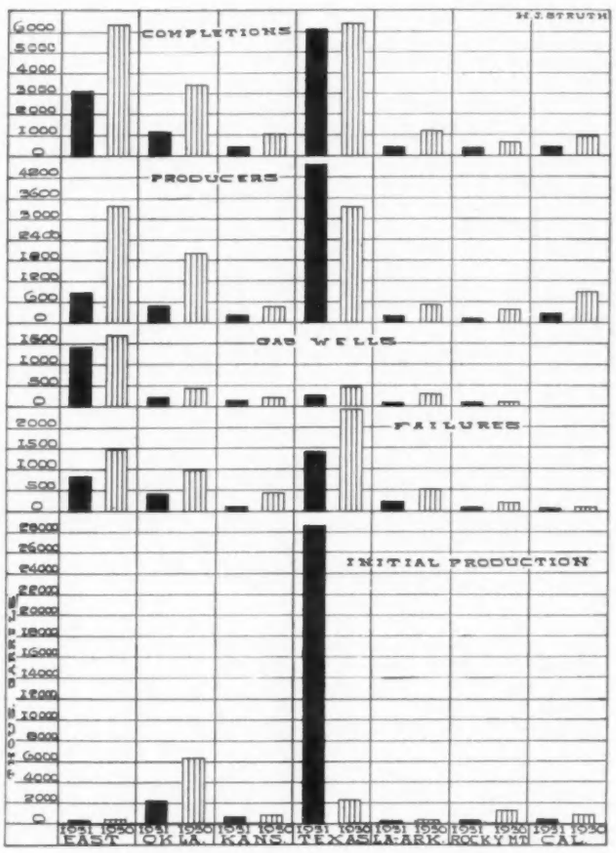


FIGURE 5
United States Field Operations, 1930-1931.

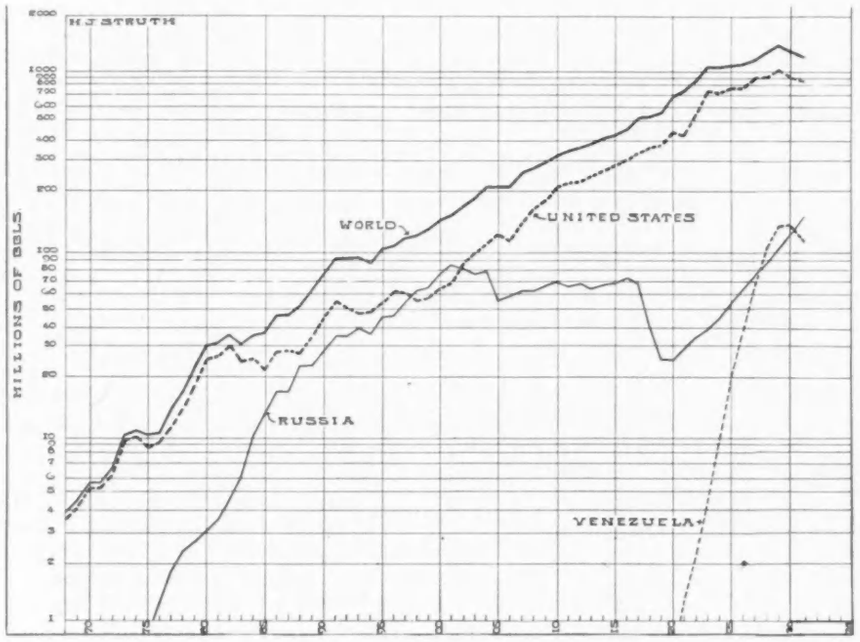


FIGURE 1
World Production of Petroleum Showing Relation of United States, Russia and Venezuela.

Curtailment Checks World Production Rise

A RATHER startling fact in the world's oil situation is the revelation that if it had not been for reduced output of petroleum in the United States, there would have been an increase in the world's production. Preliminary figures show that the total output of oil throughout the world during 1931 amounted to approximately 1,374,251,000 barrels, a decline under 1930 of 44,483,000 barrels. Of that total, the United States produced 62.1 per cent, indicating a further gradual decline in its position as the chief source of the world's oil supply. It will be noted that there has been a considerable decline in the relative rank of the United States in world's production; a recession from its comparatively recent position of having produced more than 71 per cent of the world's oil. Russia has succeeded Venezuela as the second largest oil producing country of the world. In fact, under existing intensive development of oil resources in Russia, there is every likelihood that it will continue to outrank all other countries outside of the United States as an important source of petroleum. The effect of increased production of Russian oil is already being felt keenly by the industry in the United States. Last year, a substantial quantity of Russian petroleum found its way into foreign market channels formerly dominated by oil produced in the United States. This year, under renewed government plans, it is likely that there will be a further increase in the production of Russian oil and a consequent additional displacement of foreign markets to the industry of the United States. Information from foreign sources indicates that a number of

TABLE 1
WORLD'S PRODUCTION OF PETROLEUM
As Estimated by The OIL WEEKLY*

	1931	%	1930	%
United States	850,101,000	62.1	898,011,000	63.3
Russia	161,000,000	11.8	135,165,000	9.5
Venezuela	118,000,000	8.5	137,675,000	9.7
Rumania	48,000,000	3.5	41,680,000	2.9
Persia	50,000,000	3.6	45,420,000	3.2
Dutch East Indies	36,500,000	2.7	40,150,000	2.8
Mexico	31,750,000	2.3	39,530,000	2.8
Colombia	18,500,000	1.3	20,346,000	1.4
Peru	10,500,000	.8	12,458,000	.9
Trinidad	10,000,000	.7	9,120,000	.6
Argentina	11,500,000	.8	8,910,000	.6
India	7,500,000	.5	8,280,000	.6
Sarawak	4,000,000	.3	5,830,000	.4
Poland	4,250,000	.3	4,840,000	.3
Japan	2,000,000	.2	1,950,000	.2
Sakhalin	2,000,000	.2	1,670,000	.2
Ecuador	1,800,000	.1	1,559,000	.1
Egypt	2,100,000	.2	1,910,000	.1
Canada	1,500,000	.1	1,500,000	.1
Germany	1,250,000	.1	1,161,000	.1
Iraq	1,200,000	.1	750,000	.1
Others	800,000	.1	819,000	.1
Total	1,374,251,000	100.0	1,418,734,000	100.0

*1931 production totals based upon official data for foreign countries received for periods varying from seven to 11 months. U. S. production for 1931 based upon Bureau of Mines' figures for 11 months ending November.

European countries have eagerly sought petroleum products originating in Russia. In fact, Russian gasoline is being transported into England, France and Germany, at a rate which is expected to absorb fully 65 per cent of the Russian output. What this means to the American oil exporter is not difficult to visualize.

Although the need for curtailment of oil production throughout the world has been recognized by a majority of nations, it is apparent from the facts at hand that Russia, Rumania, Persia and Argentina were in conflict with the generally accepted theory. Russian oil production increased during 1931 to the extent of about 26,000,000 barrels, while Rumania's output rose about 6,500,000 barrels. Then, too, there was an increase in Persia's output of approximately 4,500,000 barrels and a gain of about 2,500,000 barrels in production of Argentina. Practically all other countries of the world recorded a decline in oil production. Table 1 shows the approximate output of oil for practically every producing country in the world, showing its rank in percentage and comparing the record of 1931 with that of 1930. Venezuelan production declined in 1931 to the extent of nearly 20,000,000 barrels, placing that country third in rank, succeeded by Russia. While not of immediate consequence, the upward trend of oil production in Germany cannot be ignored. Development of the Westphalian producing area, near Hamburg, Germany, is meeting with considerable success and gives promise of becoming an area of considerable future importance. Last year, Germany produced about 1,250,000 barrels of petroleum, an increase over 1930 of nearly 100,000 barrels. Among other lesser immediate important areas to show increased output during 1931 were Ecuador, Egypt and Iraq, in addition to Germany. Upon completion of a trunk pipe line in Iraq, it is expected that there will be a considerable gain in oil production of that area. In fact, the proven producing zones in Iraq place that area in an extremely important future role as a world factor of oil supply. Figure 1 shows the course of oil production of the leading producing countries of the world.

Great Britain and its possessions constitute the largest export market for the American petroleum industry. In 1931, the bulk of American crude oil exports went to Canada, while the bulk of foreign gasoline shipments terminated in Great Britain. Table 2 presents some salient facts concerning the source of imports and disposition of exports during 1931. Venezuela and Colombia were the principal sources of American foreign crude oil supply, while the Dutch West Indies contributed the bulk of imports of gasoline and fuel oil. Mexico, formerly the chief source of foreign crude, only exported about 8,800,000 barrels to the United States, while Venezuela contributed over 21,000,000 barrels and Colombia 11,500,000 barrels. Of the total imports of gasoline into the United States, the Dutch West Indies contributed about 87 per cent. At the same time, 96 per cent of the imports of gas and fuel oil into the United States originated in the Dutch West Indies. This phase of the American import situation is difficult to understand, since the receipt of more than 25,000,000 barrels of gas and fuel oil from foreign sources only added to an already excessive supply of that class of products in storage in the United States. Imports of lubricants in 1931 amounted to but 30,000 barrels, representing specialties purchased in Europe in package-lots. The foreign market for lubricants consisted of 8,250,000 barrels, having a rather wide distribution, with the chief buyers being the United Kingdom and France.

Russia and Rumania constitute the most serious competitors of the American petroleum industry abroad. The relative cheapness of petroleum products produced by these countries has encouraged trade with other countries of the world, and even offers a menacing gesture in our own domestic market situation. In fact, a second shipment of Rumanian gasoline through the Detroit customs district indicates the extent to which low prices influence the buyer, even within our own over-supplied country. That Russian oil is rapidly gaining a foothold in the world's oil markets is shown by reports constantly received from various foreign sources. Only recently, it was intimated that the Chilean government had approached the Soviet government with a proposal to exchange Chilean nitrates for Russian petroleum. Exports of Russian petroleum products for the first eight months of last year, according to official Soviet figures, were made to England, Italy, Egypt, Spain, Germany, Turkey, Belgium, France, Denmark, Sweden, India, Algiers, Morocco and numerous other countries of the world. Total exports for that period amounted to 2,945,449 tons, against 2,806,276 tons in the corresponding period of 1930. It was also recently reported that the Spanish petroleum monopoly had contracted with the Russian government to supply during the three years ending with 1934, 2,133,000 barrels of gasoline, 19,300 barrels of kerosene, 290,000 barrels of gas oil, 350,000 barrels of Mazout and 119,000 barrels of lubricating oil.

TABLE 2

Source of Imports and Disposition of Exports Crude Oil and Principal Refined Products Year 1931*

(Figures in Thousands of Barrels)

	Imports	Exports
Crude Oil—		
Mexico	8,800	.....
Venezuela	21,300	.....
Dutch West Indies	4,300	.....
Colombia	11,500	.....
Japan	....	3,800
Canada	....	20,300
Other Countries	835	2,650
Total	46,735	26,750
Gasoline—		
Dutch West Indies	11,849	1,150
Trinidad	1,220	.....
Canada	....	3,000
Australia	....	2,370
Rumania	55	.....
United Kingdom	....	13,040
France	....	6,500
Other Countries	376	20,540
Total	13,500	46,600
Gas and Fuel Oils—		
Dutch West Indies	23,900	650
Canada	....	1,900
Mexico	1,159	1,175
Germany	....	1,825
Panama	....	2,600
Japan	....	5,450
Chile	....	3,030
Other Countries	191	12,870
Total	25,250	29,500
Lubricating Oils—		
Belgium	....	620
Denmark	....	120
Germany	....	825
United Kingdom	....	1,870
Canada	....	400
France	....	1,335
Other Countries	30	3,080
Total	30	8,250

*Preliminary—Subject to revision.

Fewer Wells But Higher Initial Production in 1931

UNSATISFACTORY market conditions during 1931 resulted in a sharp slump in field developments. Summarized within this section are complete field statistics for every proven and wildcat area of the United States. These tables present in comparative form field developments by counties or districts of each oil producing state, showing number of wells completed, producing oil wells, gas wells and failures, as well as initial recorded oil and gas production. In addition, the tables also present individual production statistics, as indicated by cumulative weekly production estimates of the American Petroleum Institute.

Figure 5 on page 38 presents a graphic comparison of principal changes recorded by field developments during 1931. Contrary to the general trend last year was the number of producing oil wells completed in Texas. There, while fewer wells were drilled than in 1930, a considerable gain was recorded in productive well completions. Obviously, the gain in productive wells was due to the success attending development of the East Texas area. All other producing areas registered a sharp decline in drilling operations, the total number of wells completed in the United States having dropped to 11,716, against 19,848 wells in 1930.

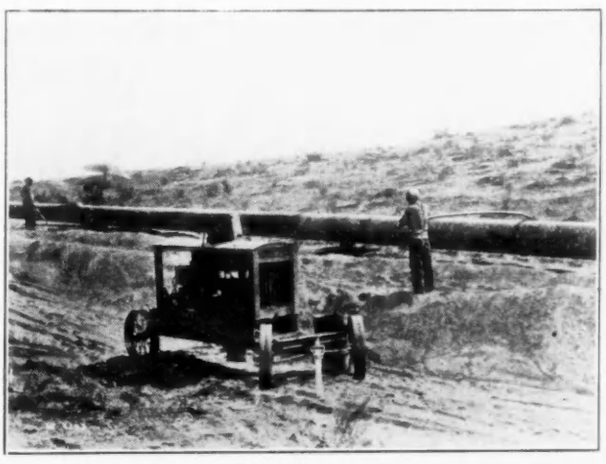
Initial Production Up

Initial oil production rose sharply in 1931, as a result of unusual activity and success in drilling operations in the East Texas area. Consequently, the rated initial production of new wells completed in Texas rose to an all-time record figure of 28,610,000 barrels, against the preceding year's total of 2,113,000 barrels. This boosted the total initial production of the United States to the new high record of 31,590,000 barrels, against 10,444,000 barrels in 1930. Slowing down of activities in Oklahoma, particularly at Oklahoma City, resulted in a sharp decline in the rate of new oil production. The facts recorded herein show that Oklahoma's initial oil production dropped from the record-breaking total of 6,010,000 barrels in 1930 to 2,027,000 barrels in 1931.

Analysis of production rates recorded by the various fields revealed a decidedly lower trend during 1931, outside of East Texas. Except for East Texas, it is apparent that the industry had dissipated its prospecting energies during 1931, having been discouraged against further development of prospective producing areas by the rigorous decline in posted prices of crude oil. As a result, the year closed with proven production on the decline practically everywhere but in East Texas and with no assurance of the development of additional flush areas of any consequence. In fact, a considerable number of flush fields gave unmistakable signs of permanent decline that might well be regarded as a favorable sign for the immediate future of the industry. A goodly number of former flush producing areas in California, Oklahoma and Texas, as well as in other leading producing states, recorded definite signs of natural decline in rate of productivity during 1931. Removal of the incentive to indulge in wildcat operations was undoubtedly a blessing to the industry and can be looked upon as conducive to more pronounced and perhaps more justified effort in this direction in the near future.

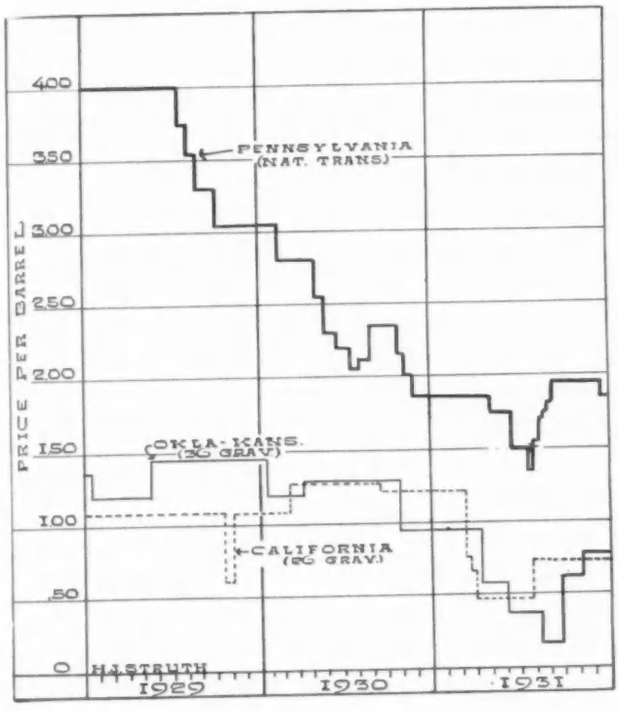
As a result of the severe decline in posted prices during 1931, the value of crude production was drastically reduced. Preliminary figures indicate that the total output of 1931 was valued at only $510,060,000, against $1,070,200,000 in 1930. This meant a shrinkage in value of $560,140,000 representing an average posted price of but 66 cents a barrel for the year. Development of natural gas production was a feature of field operations in the Eastern states. Particularly in New York and Pennsylvania, the discovery of highly productive gas sands boosted the quantity of new gas production to a new high record. Gas field development in Allegany, Schuyler and Steuben counties, New York, caused new gas production to increase from a combined rate of 14,750,000 cubic feet in 1930 to 325,000,000 cubic feet in 1931. Similarly, in Pennsylvania, along the New York state line, more gas wells were completed than in 1930, while new gas production rose about 66 per cent above the rate recorded in 1930. The Tioga-Wayne district of Pennsylvania was particularly active during 1931, resulting in a material increase in gas well completions and a sharp gain in the quantity of new gas production obtained.

Final figures compiled from American Petroleum Institute estimates of crude oil production for 1931 showed but a comparatively slight difference compared with preliminary data based upon Bureau of Mines reports. In fact, the weekly estimates of the American Petroleum Institute indicated a total output for the United States during 1931 of approximately 846,000,000 barrels, whereas Bureau of Mines figures for the first 11 months of last year indicated a total production for the United States of about 850,000,000 barrels. It is apparent, therefore, that the production figures shown for individual fields, in the accompanying tables of field developments, are a reliable index of what occurred during the past year.



—Photo Courtesy Lincoln Electric Company.

Crude Oil Price Changes During 1931



Course of Crude Prices

January 14, Sun Pipe Line Company met schedule posted by Humble Oil & Refining Company, January 14, on all grades of Texas Gulf Coast oil.

January 15, all purchasers met Humble Oil & Refining Company's schedule of reduced prices posted for Texas crudes as of January 14.

The Texas Company, in addition to meeting Humble Oil & Refining Company's schedule in Texas, reduced Markham crude from 75 cents to 69 cents.

March 5, Stanolind Crude Oil Purchasing Company posted reduction on all grades of Mid-Continent crude, ranging from 12 cents to 40 cents.

Magnolia Petroleum Company reduced all grades of Oklahoma, Kansas and North Texas crude from 13 cents to 40 cents.

Ohio Oil Company posted reductions on Central West and Rocky Mountain crudes, ranging from 35 to 50 cents.

March 10, Union Oil Company of California initiated posting reductions in practically all fields of the state from 5 cents to 60 cents. The reduction was met by Standard Oil Company, California.

Humble Oil & Refining Company posted reductions for all grades of North Texas, Panhandle, West Texas, and Lea County, New Mexico. West Texas and New Mexico oil is now purchased on a flat-price basis of 40 cents. Salt Flat and Darst Creek were slashed 30 cents; Pettus 15 cents. Gray County and Carson-Hutchinson County, Panhandle oils, are quoted on a new gravity scale which begins at 35 degrees, ending at 40 and above.

Standard Oil Company, Louisiana, posted reductions on all grades of Louisiana and Arkansas crude. The reductions ranged from 28 cents to 55 cents.

March 15, Union Oil Company of California posted further reduction for California crude of from one cent to 30 cents. General Petroleum Corporation also announced similar reductions. Kettleman Hills 40 gravity oil now 60 cents against former price of 90 cents. Thirty gravity oil in Southern California fields now 68 cents.

March 30, A complete revision of California crude prices was made when Union Oil Company posted price ranges in leading fields on an inverted scale; differentials applying in reverse order from high to low gravity oil. Other purchasers are meeting the postings. In all Los Angeles Basin fields except Playa del Rey oil from 14 to 20.9 gravity is posted at 65 cents, with a deduction of three cents for each degree up the gravity scale to 30.9 which is priced at 35 cents. All oil above 30 gravity is posted at a flat price of 35 cents. In most fields the new price scale makes heavy oil worth almost double the price in effect for light oil.

March 26, Magnolia Petroleum Company posted the Mid-Continent gravity scale for East Texas; 36 gravity 59 cents compared with a former unofficial flat price of 40 cents for all grades.

April 23, Joseph Seep Purchasing Agency posted reductions on all grades of Pennsylvania oil of from 10 to 20 cents. National Transit crude $1.75 a barrel, a reduction of 10 cents; Eureka Pipe Line oil $1.50, a reduction of 20 cents. Effective April 28, Southwest Pennsylvania crude was reduced another 10 cents to $1.60. Magnolia Petroleum Company met prices posted by Humble Oil & Refining Company, April 21, in North and Central West Texas, Panhandle and West Texas and also for Mirando, Salt Flat and Darst Creek. In addition, Magnolia Petroleum Company also reduced Luling and Corsicana heavy oil to 38 cents.

May 26, Humble Oil & Refining Company initiated reduction in East Texas of 30 cents below the Mid-Continent gravity scale which obtained previous to the adjustment. The new schedule starts with below 35 gravity, 25 cents per barrel, with two-cent differential to 40 gravity and above, 37 cents. Arkansas Pipe Line Corporation (Cities Service), met Humble Oil & Refining Company's reduced schedule on East Texas crude. Atlas Pipe Line Company announced price 33 cents for 38 gravity, same as Humble Oil & Refining Company for that gravity, stating that was average of oil handled by them from East Texas. They have been paying 40 cents flat. Arkansas Pipe Line Company has been following Mid-Continent scale.

June 1, Stanolind Crude Oil Purchasing Company initiated a reduction of from 18 cents to 30 cents per barrel for all grades of Mid-Continent crude. This makes the bottom price 25 cents below 29 gravity and the top price 37 cents for 40 gravity and above. Sinclair Refining Company met this reduction on the same date.

June 2, 1931, Magnolia Petroleum Company met reduced prices posted by Stanolind Crude Oil Purchasing Company, posting for all grades of Oklahoma, Kansas and North Texas crude a minimum price of 22 cents or below 26 gravity and a maximum price of 37 cents or 40 gravity and above.

June 1, Stanolind Crude Oil Purchasing Company reduced Mid-Continent crude below 29 gravity 25 cents a barrel; 29 gravity 26 cents a barrel, with one-cent differential on each degree to 40 and above which is posted at 37 cents.

June 2, Magnolia Petroleum Company posted reduction equipment to Stanolind Crude Oil Purchasing Company's scale on all grades of Mid-Continent crude, except East Texas and Panhandle Texas. Magnolia scale begins with 26 gravity which is posted at 22 cents a barrel, with differential of one cent for each degree beginning with 26 gravity and ending with 40 and above which is 37 cents. The Texas Company reduced all grades of North Louisiana crude, North Texas, North Central Texas, Central Texas, Panhandle and Gulf Coast. The reduction was also met by Gulf Pipe Line Company. Gulf Coast was placed on a gravity scale as one grade, eliminating former Grade "A" and Grade "B." New prices for Gulf Coast oil begin at 25 gravity, which is posted at 44 cents, with differential of one cent for each degree to 40 and above which is posted at 60 cents.

June 3, Standard Oil Company of Louisiana reduced all grades of North Louisiana and Arkansas crude, to conform with Mid-Continent gravity scale. Homer, Haynesville, Bull Bayou, Caddo, Crischton, DeSoto, Sarepta, Carterville, Cotton Valley and El-Dorado crudes were reduced 30 cents making below 29 gravity 25 cents. Top prices are posted at 37 cents.

June 2, Ohio Oil Company reduced Elk Basin and Grass Creek 28 cents a barrel; big Muddy 25 cents; Lance Creek 23 cents; Rock Creek 21 cents, Sunburst 25 cents. On the same date The Ohio Oil Company announced reductions of Lima, Indiana, Illinois, Princeton, Wooster and Western Kentucky crudes. The reductions range from 25 to 29 cents a barrel.

June 3, Humble Oil & Refining Company posted reductions on all grades of North Texas, Central Texas, Panhandle, West Texas and Gulf Coast crudes. Announcement was also made that this company had withdrawn its posting on East Texas. The reductions con-

formed to prices previously posted for Mid-Continent, while flat prices for West Texas and New Mexico were cut to 25 cents. Company's posting on Gulf Coast crude also eliminated the "A" and "B" grades, posting 44 cents for oil of below 25 gravity with a differential of 1 cent on each degree beginning with 25 gravity and ending with 35 and above which is posted at 55 cents.

Magnolia Petroleum Company posted reductions conforming to the Mid-Continent gravity scale in North Louisiana and Arkansas. Smackover was reduced to 25 cents and El Dorado East Field was also posted at 25 cents. This company also met reductions posted for Panhandle, Texas, crude by the Humble Oil & Refining Company. Sun Pipe Line Company posted a separate price schedule on Gulf Coast oil, retaining the "A" and "B" grades. Grade "A" crude is posted by this company at 44 cents a barrel, while the "B" grade begins at 44 cents a barrel for below 25 gravity, with a differential of 1 cent on each degree beginning with 25 gravity and ending with 35 and above which is 55 cents.

June 3, Joseph Seep Purchasing Agency posted a 25-cent reduction on all grades of Pennsylvania crude, reducing National Transit oil to $1.50 a barrel. Corning reduced to 65 cents a barrel.

June 4, Louisiana Oil Refining Corporation, Cities Service Oil Company and Atlas Pipe Line Company met Standard Oil Company of Louisiana schedule on North Louisiana crude. Urania was reduced from 20 to 30 cents a barrel. The Atlas Pipe Line Company also announced withdrawal of posting in East Texas.

Imperial Oil Company posted a reduction of 20 cents a barrel on Canadian crude, posting a price of $1.55 on Petrolia crude and $1.62 a barrel on Oil Springs oil.

Vacuum Oil Company met Humble Oil & Refining Company scale on Gulf Coast oil, posting a minimum price on Lockport oil of 44 cents a barrel and a top price of 55 cents.

June 19, Standard Oil Company of California posted increase for all grades of California crude of from 20 to 40 cents a barrel. The new scale of prices was generally adopted by major purchasing companies on June 20.

June 20, Magnolia Petroleum Company abolished gravity scale in Mid-Continent. Flat prices were posted for various grades in Oklahoma, Kansas, Texas, Louisiana and Arkansas. A flat price of 20 cents a barrel was also posted for East Texas crude.

June 24, Sinclair Refining Company and Gulf Pipe Line Company posted a flat price of 20 cents for East Texas crude, meeting the posting announced previously by Magnolia Petroleum Company. This re-establishes a posted price for East Texas oil which was withdrawn by major purchasing companies on June 3.

July 8, Humble Oil & Refining Company reduced prices all grades of Texas and New Mexico crude. Prices were reduced on an average of 15 cents a barrel.

All Mid-Continent crude prices were reduced 15 cents, meeting the cut announced for Texas and New Mexico by Humble Oil & Refining Company. Sinclair Refining Company and Stanolind Crude Oil Purchasing Company. All major companies purchasing Mid-Continent oil on a gravity basis are now paying from 10 cents to 22 cents a barrel.

July 10, Ohio Oil Company reduced Central West and Rocky Mountain crude 15 cents.

July 11, Standard Oil Company of Louisiana posted reductions averaging 15 cents for all grades of Louisiana and Arkansas.

Joseph Seep Purchasing Agency posted a reduction of 15 cents a barrel for all grades of Pennsylvania crude. The reduction was also met by Tidewater Pipe Line Company, applying to crude oil produced in the Bradford and Allegheny district.

July 13, Imperial Oil Company reduced Petrolia and Oil Springs 15 cents.

July 21, Continental Oil Company announced a flat price of 40 cents for all oil purchased by that company in Oklahoma, Kansas and North Texas. This company has been paying from 10 to 22 cents a barrel for Mid-Continent oil, in line with the schedule made effective July 8, three cents higher than the former maximum posting of 37 cents.

July 22, Magnolia Petroleum Company posted a flat price of 40 cents for North Texas and Oklahoma. This was an increase of five cents above the flat prices initiated prior to the reduction posted by all other companies on July 8.

July 23, The Texas Company posted flat prices of 35 and 40 cents in North and Central Texas. Oil of 36 gravity and below was posted at 35 cents and above 36 gravity 40 cents. Increase of 20 cents a barrel was also posted by this company for crude produced in West Texas, Panhandle and New Mexico.

July 24, Humble Oil & Refining Company posted increases of from 9 cents to 18 cents for Texas and New Mexico. New prices for North Texas were placed on a flat-price basis, conforming to the new schedule posted July 23 by The Texas Company. Gulf Coast prices were also advanced nine cents a barrel, making the low price 40 cents and the top price 51 cents. All major purchasing companies met the new scale of prices and eliminated the former gravity differentials.

Standard Oil Company of Louisiana increased Arkansas and Louisiana from 10 cents to 20 cents. The gravity scale was retained in Louisiana; oil of 29 gravity and below being 30 cents, with a differential of one cent for each degree to 40 and above which is 42 cents. Smackover was boosted 15 cents and Urania 10 cents.

Imperial Oil Company increased Canadian oil prices 15 cents, making Petrolia $1.75 and Oil Springs $1.82.

Ohio Oil Company posted an increase of 15 cents for all grades of Central West crude.

July 25, Ohio Oil Company posted increases of from 10 cents to 20 cents for all grades of Rocky Mountain crude.

August 17, Joseph Seep Purchasing Agency posted an advance of five cents for all grades of Pennsylvania crude.

August 18, Ohio Oil Company posted an advance of 17 cents for all grades of Mid-Western crude and an advance of 15 cents for Rocky Mountain.

August 22, The Texas Company advanced Texas, New Mexico and Louisiana, 11 to 30 cents. North Texas, North Central Texas, Central Texas and North Louisiana were given prices of 46 cents for below 29 gravity to 70 cents for 40 gravity and above; Gray County begins at 41, end 58 cents; Carson-Hutchinson, below 34 gravity 41 cents; with top price 53 cents for 40 and above. Two-cent differential on above scale. Gulf Coast below 25 gravity 55 cents, one-cent differential to 71 cents for 40 gravity and above. Winkler, Crane-Upton counties, Texas, and New Mexico, 35 cents; Darst Creek, Markham, Texas, and Smackover, 52 cents.

Humble Oil & Refining Company met The Texas Company where they both post, except Gulf Coast schedule stops at 35 gravity, 66 cents. Refugio heavy and Mirando, 60 cents; Pettus, 70 cents; Salt Flat and Darst Creek, 52 cents.

August 22, Magnolia Petroleum Company posted: Central Texas, 64 cents; Panhandle, Gray County, 58 cents; Carson-Hutchinson, 51 cents; West Texas, 35 cents; Mirando, 60 cents; Darst Creek, 52 cents; Luling, 34 cents; Corsicana Heavy, 34 cents; Oklahoma, including Cushing, Yale, Oklahoma City, Morrison, Wewoka and Seminole, 68 cents; Cement, Duncan, Walters, 60 cents; Healdton, 37 cents; Hewitt and Graham, 52 cents. North Central Texas, including only Burkburnett, Archer, Stephens, Henrietta, Electra and Olden, 68 cents. East Texas 68 cents

August 22, Gulf Refining Company of Louisiana met the advance of The Texas Company in Louisiana and Arkansas.

August 24, Ohio Oil Company advanced Elk Basin, Grass Creek, Lance Creek, Sunburst, 10 cents; Big Muddy 8 cents, and Rock Creek 5 cents.

Ohio Oil Company advanced Illinois, Princeton, Wooster, Western Kentucky, 10 cents; Lima 5 cents.

August 24, Magnolia Petroleum Company advanced its price schedule in the Arkansas-Louisiana district as follows: El Dorado and Rainbow 48 cents; East El Dorado and Smackover 45 cents; Bull Bayou 68 cents; Pine Island 58 cents; Haynesville 50 cents; and Cotton Valley 46 cents.

Phillips Petroleum Company advanced its price schedule in Texas Panhandle as follows: Gray County below 35 to 60 cents, with two cents gravity differential, making 40 and above 72 cents; Carson-Hutchinson and Moore Counties below 35.48 cents, with two cents gravity differential, making 40 and above 60 cents.

Pure Oil Company adopted Humble Oil & Refining Company's North Texas schedule in Van field and Gulf Coast district.

Standard Oil Company of Louisiana met The Texas Company's postings in North Louisiana, and advanced Smackover 15 cents to 45 cents per barrel.

August 29, Joseph Seep Purchasing of the South Penn Oil Company posted an increase of five cents a barrel on all grades of Pennsylvania crude oil. This makes the fourth advance in price since July 29, 1931.

September 1, Joseph Seep Purchasing Agency posted an advance of 5 cents for Corning, Ohio, oil in Buckeye Pipe Line Company's lines. The new price is 70 cents a barrel.

September 2, Tidal Refining Company posted a flat price of 68 cents for East Texas. This schedule, previously posted by Magnolia Petroleum Company, was also adopted on September 3 by Sinclair Refining Company. Gulf Pipe Line Company and Sun Oil Company.

September 4, Joseph Seep Purchasing Agency posted an increase of 5 cents for Corning oil, making the new price 75 cents, and increased Buckeye Pipe Line oil to $1.45; an advance of 5 cents.

September 12, Pennsylvania oil was advanced 15 cents a barrel. Bradford grade crude was posted by Tidewater Pipe Company, at $2.25, while Joseph Seep Purchasing Agency posted National Transit crude at $1.95; Southwest Pennsylvania Pipe Line oil at $1.80; Eureka Pipe Line oil $1.70, and Buckeye Pipe Line oil at $1.60.

September 16, Joseph Seep Purchasing Agency posted an increase of 5 cents a barrel for Corning. The new price is 80 cents a barrel.

November 1, Joseph Seep Purchasing Agency reduced Tidewater Pipe Company, New York and Bradford district crude 10 cents a barrel to $2.00. A reduction of 10 cents was also posted on Pennsylvania oil in Southwest Pennsylvania pipe lines, Pennsylvania oil in Eureka Pipe Line Company's lines and Pennsylvania grade in Buckeye Pipe Line Company's lines. New prices of the latter grades are now $1.70, $1.60 and $1.50.

October 31, Continental Oil Company posted an advance of 15 cents a barrel for Oklahoma. This action was followed by a number of smaller companies.

November 2, Magnolia Petroleum Company announced an increase of 15 cents a barrel for all oil purchased in Oklahoma, North Texas, Central Texas, West Texas and East Texas. Flat prices were maintained conforming to the policy adopted earlier this year. On the same date, Humble Oil & Refining Company posted an average advance of 15 cents a barrel for all oil purchased in North Texas, West Texas and New Mexico and also in the Gulf Coast district. Advances were also posted for Refugio, heavy crude; Mirando, Pettus, Salt Flat and Darst Creek.

November 3, Ohio Oil Company announced an advance of 15 cents for Illinois, Princeton, Wooster and Western Kentucky crudes and an advance of 10 cents for Lima and Indiana oil.

Ohio Oil Company posted an advance of 10 cents on Sunburst, Montana, oil and an advance of 15 cents on Elk Basin, Grass Creek, Big Muddy and Rock Creek crudes.

Imperial Oil Company posted an advance of 10 cents for Petrolia and Oil Springs, Canada, crude, making the new prices $1.90 and $1.97, respectively.

November 4, Standard Oil Company of Louisiana posted increases of 15 cents in all districts of Louisiana and Arkansas, except Smackover, which was increased 10 cents.

November 7, Joseph Seep Purchasing Agency announced a five-cent increase on Corning crude. The new price is 85 cents.

December 1, Joseph Seep Purchasing Agency posted a reduction of 10 cents for Pennsylvania crude in Buckeye Pipe Line Company's lines. The new price is $1.40 a barrel.

December 16, Joseph Seep Purchasing Agency posted a reduction of 15 cents for all grades of Pennsylvania crude except Corning. Tidewater Pipe Company, also posted a reduction of 15 cents on Bradford and New York Transit line oil.

World's Production of Crude Petroleum Since 1857, by Years and Countries, in Barrels of 42 Gallons

Year	Rumania	United States	Italy	Canada	Russia	Poland	Japan and Formosa	Germany	India	Dutch East Indies	Peru	Mexico	Argentina	Trinidad	Egypt	Other Countries	Total	Year	Pct. Prod. by U. S.
1857	1,977	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,977	1857	.00
1858	3,560	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,560	1858	.00
1859	4,349	2,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,349	1859	31.5
1860	8,542	500,000	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	508,578	1860	98.3
1861	17,279	2,113,609	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,130,917	1861	99.1
1862	23,198	3,056,690	29	11,775	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,091,692	1862	98.8
1863	27,943	2,611,309	58	82,814	40,816	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,762,940	1863	94.5
1864	33,013	2,116,109	72	90,000	64,686	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,303,780	1864	90.5
1865	39,017	2,497,700	2,265	110,000	66,542	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,715,524	1865	91.9
1866	42,534	3,597,700	992	175,000	83,052	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,899,278	1866	92.3
1867	50,838	3,847,300	791	190,000	119,917	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,708,846	1867	90.2
1868	55,369	3,646,117	367	200,000	88,327	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,990,180	1868	91.2
1869	58,533	4,215,000	144	220,000	202,308	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,695,985	1869	89.9
1870	83,765	5,260,745	86	250,000	204,618	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,799,214	1870	90.7
1871	90,030	5,205,234	273	269,397	165,129	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,730,063	1871	90.8
1872	91,251	6,293,194	131	308,100	184,391	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,877,267	1872	91.5
1873	104,036	9,893,786	467	365,052	474,379	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,837,720	1873	91.3
1874	103,177	10,926,945	604	168,807	583,751	149,837	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11,933,121	1874	91.5
1875	108,569	8,787,514	813	220,000	697,364	158,522	4,566	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,977,348	1875	88.1
1876	111,314	9,132,669	2,891	312,000	1,320,528	164,157	7,708	.....	.....	.....	.....	.....	.....	.....	.....	.....	11,051,267	1876	82.6
1877	108,569	13,350,363	2,934	312,000	1,800,720	169,792	9,560	.....	.....	.....	.....	.....	.....	.....	.....	.....	15,753,938	1877	85.4
1878	109,300	15,396,898	4,329	312,000	2,400,960	175,420	17,884	.....	.....	.....	.....	.....	.....	.....	.....	.....	18,416,761	1878	84.7
1879	110,007	19,914,146	2,891	575,000	2,761,104	214,800	23,457	.....	.....	.....	.....	.....	.....	.....	.....	.....	23,601,405	1879	84.3
1880	114,321	26,286,123	2,035	350,000	3,001,200	229,120	25,497	9,310	.....	.....	.....	.....	.....	.....	.....	.....	30,017,606	1880	87.6
1881	121,511	27,661,238	1,237	275,000	3,601,441	286,400	16,751	29,219	.....	.....	.....	.....	.....	.....	.....	.....	31,992,797	1881	86.4
1882	136,610	30,349,897	1,316	275,000	4,537,815	330,076	15,549	58,025	.....	.....	.....	.....	.....	.....	.....	.....	35,704,288	1882	85.0
1883	139,486	23,449,633	1,618	250,000	6,002,401	365,160	20,473	26,708	.....	.....	.....	.....	.....	.....	.....	.....	30,255,479	1883	77.5
1884	210,667	24,218,438	2,855	250,000	10,804,577	408,120	27,923	46,161	.....	.....	.....	.....	.....	.....	.....	.....	35,968,741	1884	67.3
1885	193,411	21,858,785	1,941	250,000	13,924,596	465,400	29,237	41,360	.....	.....	.....	.....	.....	.....	.....	.....	36,764,730	1885	59.4
1886	168,606	28,064,841	1,575	584,061	18,006,407	305,884	37,916	73,864	.....	.....	.....	.....	.....	.....	.....	.....	47,243,154	1886	59.4
1887	181,907	28,283,483	1,496	525,655	18,367,781	343,832	28,645	74,284	.....	.....	.....	.....	.....	.....	.....	.....	47,807,083	1887	59.2
1888	218,576	27,612,025	1,251	695,203	23,048,787	466,537	37,436	84,782	.....	.....	.....	.....	.....	.....	.....	.....	52,164,597	1888	59.9
1889	297,666	35,163,513	1,273	704,690	24,609,407	515,268	52,811	68,217	94,250	.....	.....	.....	.....	.....	.....	.....	61,507,095	1889	57.2
1890	383,227	45,823,572	2,998	795,030	28,691,218	659,012	51,420	108,296	118,065	.....	.....	.....	.....	.....	.....	.....	76,632,838	1890	59.9
1891	488,201	54,292,655	8,305	755,298	34,573,181	630,730	52,917	108,929	190,131	.....	.....	.....	.....	.....	.....	.....	91,100,347	1891	59.6
1892	593,175	50,514,657	18,321	779,753	35,774,504	646,220	68,901	101,404	242,284	.....	.....	.....	.....	.....	.....	.....	88,739,219	1892	56.9
1893	535,655	48,431,066	19,069	798,406	40,456,519	692,669	106,384	99,390	298,969	600,000	.....	.....	.....	.....	.....	.....	92,038,127	1893	52.6
1894	507,255	45,344,516	20,552	829,104	36,375,428	949,146	171,744	122,564	327,218	688,170	.....	.....	.....	.....	.....	.....	89,335,697	1894	55.2
1895	575,200	52,892,276	25,843	726,138	46,140,174	1,452,999	141,310	121,277	371,536	1,215,757	.....	.....	.....	.....	.....	.....	103,662,510	1895	51.0
1896	543,348	60,960,361	18,149	726,822	47,220,633	2,443,080	197,082	145,061	429,979	1,427,132	47,536	.....	.....	.....	.....	.....	114,159,183	1896	53.4
1897	570,886	60,475,516	13,892	709,857	54,399,568	2,226,368	218,559	165,745	545,704	2,551,649	70,831	.....	.....	.....	.....	.....	121,948,575	1897	49.5
1898	776,238	55,364,233	14,489	758,391	61,699,357	2,376,108	265,389	183,427	542,110	2,964,035	70,905	.....	.....	.....	.....	.....	124,924,682	1898	44.4
1899	1,425,777	57,070,850	16,121	808,570	65,954,968	2,313,047	536,079	192,232	940,971	1,795,961	89,166	.....	.....	.....	.....	.....	131,143,742	1899	43.5
1900	1,628,535	63,620,529	12,102	913,498	75,779,417	2,346,505	866,814	358,297	1,078,264	2,253,355	274,800	.....	.....	.....	.....	.....	149,132,116	1900	42.5
1901	1,678,320	69,389,194	16,150	756,679	85,168,556	3,251,544	1,110,790	313,630	1,430,716	4,013,710	274,800	10,345	.....	.....	.....	20,000	167,434,434	1901	41.4
1902	2,059,935	88,766,916	18,933	530,624	80,540,044	4,142,159	1,193,038	353,674	1,617,303	2,430,465	286,725	40,200	.....	.....	.....	26,000	182,006,076	1902	48.8
1903	2,763,117	100,461,337	17,876	486,637	75,591,256	5,234,475	1,209,371	445,818	2,510,259	5,770,056	278,092	75,375	.....	.....	.....	36,000	194,879,669	1903	51.5
1904	3,599,026	117,080,960	25,476	552,575	78,536,655	5,947,383	1,419,473	637,431	3,385,468	6,508,485	345,834	125,625	.....	.....	.....	40,000	218,204,391	1904	53.7
1905	4,420,987	134,717,580	44,027	634,095	54,960,270	5,765,317	1,472,804	560,963	4,137,098	7,849,896	447,880	251,250	.....	.....	.....	30,000	215,292,167	1905	62.6
1906	6,378,184	126,493,936	53,577	569,753	58,897,311	5,467,967	1,710,768	578,610	4,015,803	8,180,657	536,294	502,500	.....	.....	.....	30,000	213,415,360	1906	59.2
1907	8,118,207	166,095,335	59,875	788,872	61,850,734	8,455,841	2,001,838	756,631	4,344,162	9,982,597	756,226	1,005,000	101	.....	.....	30,000	264,245,419	1907	63.2
1908	8,252,157	178,527,355	50,966	527,987	62,186,447	12,612,295	2,070,145	1,009,278	5,047,038	10,283,357	1,011,180	3,932,900	11,472	169	.....	30,000	285,552,746	1908	62.5
1909	9,327,278	183,170,874	42,388	420,755	65,970,350	14,932,799	1,889,563	1,018,837	6,676,517	11,041,852	1,316,118	2,713,500	18,431	57,143	.....	20,000	298,616,405	1909	61.3
1910	9,723,806	209,557,248	50,830	315,895	70,336,574	12,673,688	1,930,661	1,032,522	6,137,990	11,030,620	1,330,105	3,634,080	20,753	142,857	.....	20,000	327,937,629	1910	64.0
1911	11,107,450	220,449,391	74,709	291,096	66,183,691	10,519,270	1,658,903	1,017,045	6,451,203	12,172,949	1,368,274	12,552,798	13,119	285,307	9,150	20,000	344,174,355	1911	64.0
1912	12,976,232	222,935,044	53,778	243,336	68,019,208	8,535,174	1,671,405	1,031,050	7,116,672	10,845,624	1,751,143	16,558,215	47,007	436,805	205,905	20,000	352,446,598	1912	68.9
1913	13,554,768	248,446,230	47,198	228,080	62,834,356	7,818,130	1,942,009	995,764	7,930,149	11,172,294	2,133,261	25,696,291	130,618	503,616	94,635	20,000	383,547,369	1913	64.7
1914	12,826,579	265,762,535	39,849	214,805	67,020,522	5,033,350	2,738,378	995,764	7,409,792	11,834,802	1,917,802	26,235,403	275,500	643,533	777,038	20,000	403,745,342	1914	65.8
1915	12,029,913	281,104,104	43,898	215,464	68,548,062	4,158,899	3,118,464	995,764	8,202,674	12,386,800	2,487,251	32,910,508	516,120	750,000	262,208	10,000	427,740,129	1915	65.7
1916	10,298,208	300,767,158	50,585	198,123	72,801,110	6,461,706	2,997,178	995,764	8,491,137	13,174,399	2,550,645	40,545,712	796,920	928,581	411,000	25,000	461,493,226	1916	65.2
1917	2,681,870	335,315,601	50,334	205,332	69,000,000	5,965,447	2,898,654	995,764	8,078,843	12,928,955	2,533,417	55,292,770	1,144,737	1,599,455	1,008,750	7,004,973	506,702,902	1917	66.2
1918	8,730,235	355,927,716	35,953	304,741	40,456,182	5,591,620	2,449,069	711,260	8,000,000	13,284,936	2,536,102	63,828,327	1,321,315	2,082,068	2,079,750	7,390,080	514,729,354	1918	69.1
1919	6,614,000	377,719,000	35,000	241,000	25,495,000	6,054,000	2,175,000	234,000	8,735,000	15,428,000	2,616,000	87,073,000	1,183,000	1,841,000	1,501,000	750,000	544,885,000	1919	62.0
1920	7,435,344	443,402,000	34,180	196,937	25,429,600	5,606,116	2,139,777	212,046	7,500,000	17,529,210	2,816,649	163,540,000	1,665,989	2,083,027	1,042,000	14,221,125	694,854,000	1920	63.8
1921	8,368,000	427,183,000	34,400	190,338	29,150,000	5,167,000	2,447,000	200,000	8,000,000	16,958,105	3,699,280	193,397,587	1,747,410	2,354,000	1,255,000	19,913,880	765,065,000	1921	61.7
1922	9,843,000	557,531,000	31,000	179,000	32,966,000	.....	2,042,000	319,000	7,700,000	16,720,000	5,314,000	182,278,000	3,018,000	2,445,000	1,188,000	33,235,000	854,809,000	1922	65.2
1923	10,867,000	732,407,000	34,000	170,000	39,156,000	5,373,000	1,789,000	312,000	8,320,000	19,868,000	5,699,000	149,858,000	3,400,000	3,051,000	1,054,000	37,855,000	1,019,213,000	1923	71.3
1924	13,000,000	710,463,600	.....	170,000	44,000,000	5,750,000	1,666,660	33,330	8,000,000	21,000,000	6,000,000	144,000,000	4,000,000	3,333,330	1,000,000	44,045,000	1,009,461,920	1924	70.3
1925	16,646,000	763,743,000	45,000	318,000	52,448,000	5,960,000	2,000,000	411,000	8,000,000	21,422,000	9,164,000	115,515,000	5,818,000	4,654,000	1,226,000	60,196,000	1,067,566,000	1925	71.5
1926	23,500,000	766,504,000	45,000	350,000	62,000,000	5,600,000	1,820,000	600,000	8,000,000	21,700,000	11,000,000	90,700,000	6,500,000	5,500,000	1,250,000	83,863,000	1,096,690,000	1926	69.9
1927	26,368,000	901,129,000	47,000	477,000	77,018,000	5,342,000	1,789,000	663,000	8,032,000	27,459,000	10,127,000	64,121,000	8,630,000	5,380,000	1,267,000	6,360,000	1,262,582,000	1927	71.4
1928	30,773,000	901,474,000	46,000	624,000	84,704,000	5,492,000	1,944,000	630,000	8,741,000	32,118,000	12,006,000	50,151,000	9,070,000	7,684,000	1,842,000	7,243,000	1,324,733,000	1928	68.0
1929	34,689,000	1,007,323,000	44,000	1,121,000	99,507,000	4,988,000	2,010,000	711,000	8,366,000	38,072,000	13,422,000	44,688,000	9,391,000	8,716,000	1,864,000	7,777,000	1,484,451,000	1929	67.9
1930	41,680,000	898,011,000	(a)	1,500,000	135,165,000	4,840,000	1,950,000	1,161,000	8,280,000	40,150,000	12,458,000	39,530,000	8,910,000	9,120,000	1,910,000	†9,069,000	1,418,734,000	1930	63.3
1931*	48,000,000	850,101,000	(a)	1,500,000	161,000,000	4,250,000	2,000,000	1,250,000	7,500,000	36,500,000	10,500,000	31,750,000	11,500,000	10,000,000	2,100,000	†8,000,000	1,374,251,000	1931	62.1

Year	Venezuela	Persia	Colombia	Ecuador
1927	63,134,000	39,688,000	15,002,000	537,000
1928	105,749,000	43,461,000	19,897,000	1,084,000
1929	137,472,000	42,145,000	20,385,000	1,760,000
1930	137,675,000	45,420,000	20,346,000	1,559,000
1931	118,000,000	50,000,000	18,500,000	1,800,000

*All figures preliminary estimates based upon reliable information obtained from foreign government sources.
†Includes Czecho Slovakia, Sakhalin, France, Iraq, Sarawak and Italy.
(a) Included with "other countries."

Petroleum Marketed in the United States, 1859-1931, in Barrels of 42 Gallons

Figures taken from Petroleum Statistics compiled by the Department of Commerce

	Pennsylvania and New York	Ohio	West Virginia	California	Kentucky and Tennessee	Colorado	Indiana	Illinois	Kansas	Texas	Missouri	Oklahoma	Wyoming Includes Montana and New Mexico	Louisiana	Arkansas	United States	Total Value	Year
1859	2,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,000	$ 32,000	1859
1860	500,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	500,000	4,800,000	1860
1861	2,113,609	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,113,609	1,035,668	1861
1862	3,056,690	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,056,690	3,209,525	1862
1863	2,611,309	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,611,309	8,225,663	1863
1864	2,116,109	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,116,109	20,896,576	1864
1865	2,497,700	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,497,700	16,459,853	1865
1866	3,597,700	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,597,700	30,455,398	1866
1867	3,347,300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,347,300	8,066,993	1867
1868	3,646,117	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,646,117	13,217,174	1868
1869	4,215,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,215,000	23,730,450	1869
1870	5,260,745	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,260,745	20,503,754	1870
1871	5,205,234	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,205,234	22,591,180	1871
1872	6,293,194	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,293,194	21,440,503	1872
1873	9,893,786	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,983,786	18,100,464	1873
1874	10,926,945	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,926,945	12,647,527	1874
1875	8,787,514	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,787,514	7,368,133	1875
1876	8,968,906	31,763	120,000	12,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,132,669	22,982,822	1876
1877	13,135,475	29,888	172,000	13,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13,350,363	31,788,566	1877
1878	15,163,462	38,179	180,000	15,227	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15,396,868	18,044,620	1878
1879	19,685,176	29,112	180,000	19,858	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	19,914,146	17,210,708	1879
1880	26,027,631	38,940	179,000	40,552	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26,286,123	24,600,638	1880
1881	27,376,509	33,867	151,000	99,862	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27,661,238	25,448,339	1881
1882	30,053,500	39,761	128,000	128,636	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30,349,897	23,631,165	1882
1883	23,128,389	47,632	126,000	142,857	4,755	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23,449,663	25,790,252	1883
1884	23,772,209	90,081	90,000	262,000	4,148	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24,218,438	20,595,966	1884
1885	20,776,041	661,580	91,000	325,000	5,164	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21,858,785	19,198,243	1885
1886	25,798,000	1,782,970	102,000	377,145	4,726	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28,064,841	19,996,313	1886
1887	22,356,193	5,022,632	145,000	678,572	4,791	76,295	.....	.....	.....	.....	.....	.....	.....	.....	.....	28,283,483	18,877,094	1887
1888	16,488,668	10,010,868	119,448	690,333	5,096	297,612	.....	.....	.....	.....	.....	.....	.....	.....	.....	27,612,025	17,947,620	1888
1889	21,487,435	12,471,466	544,113	303,220	5,400	316,476	33,375	1,460	500	48	20	.....	.....	.....	.....	35,163,513	26,963,340	1889
1890	28,458,208	16,124,656	492,578	307,360	6,000	368,842	63,496	900	1,200	54	278	.....	.....	.....	.....	45,823,572	35,365,105	1890
1891	33,009,236	17,740,301	2,406,218	323,600	9,000	655,482	136,634	675	1,400	54	25	30	.....	.....	.....	54,292,655	30,529,553	1891
1892	28,422,377	16,362,921	3,810,086	385,049	6,500	824,000	136,634	521	5,000	45	10	80	.....	.....	.....	50,514,657	25,906,463	1892
1893	20,314,513	16,249,769	8,445,412	470,179	3,000	594,390	2,335,293	400	18,000	50	50	10	.....	.....	.....	48,431,066	28,950,326	1893
1894	19,019,990	16,792,154	8,577,624	705,969	1,500	515,746	3,688,666	300	40,000	60	8	130	2,369	.....	.....	49,344,516	35,522,095	1894
1895	19,144,390	19,545,233	8,120,125	1,208,482	1,500	438,232	4,386,132	200	44,430	50	10	37	3,455	.....	.....	52,892,276	57,632,296	1895
1896	20,584,421	23,941,169	10,019,770	1,252,777	1,680	361,450	4,680,732	250	113,571	1,450	43	170	2,878	.....	.....	60,960,361	58,518,709	1896
1897	19,262,066	21,560,515	13,090,045	1,903,411	322	384,934	4,122,356	500	81,098	65,975	19	625	3,650	.....	.....	60,475,516	40,874,072	1897
1898	15,948,464	18,738,708	13,615,101	2,257,207	5,568	444,383	3,730,907	360	71,980	546,070	10	.....	5,475	.....	.....	55,364,233	44,193,359	1898
1899	14,374,512	21,142,108	13,910,630	2,642,095	18,280	390,278	3,848,182	360	69,700	669,013	132	.....	5,560	.....	.....	57,070,850	64,603,904	1899
1900	14,559,127	22,362,739	16,195,675	4,324,484	62,259	317,385	4,874,392	200	74,714	836,039	[1]1,692	6,472	5,450	.....	.....	63,620,529	75,989,313	1900
1901	13,831,996	21,648,083	14,177,126	8,786,330	137,259	460,520	5,757,086	250	179,151	4,393,658	[2]2,335	10,000	5,400	.....	.....	69,389,194	66,417,335	1901
1902	13,183,610	21,014,231	13,513,345	13,984,268	185,331	396,901	7,480,896	200	331,749	18,083,658	[3]757	37,100	6,253	548,617	.....	88,766,916	71,178,910	1902
1903	12,518,134	20,480,286	12,899,395	24,382,372	554,286	483,925	9,186,411	.....	932,214	17,955,572	[3]3,000	138,911	8,960	917,771	.....	100,461,337	94,694,050	1903
1904	12,239,026	18,876,631	12,644,686	29,649,434	998,284	501,763	11,339,124	.....	4,250,779	22,241,413	[2]2,572	1,366,748	11,542	2,958,958	.....	117,080,960	101,175,455	1904
1905	11,554,777	16,346,660	11,578,110	33,427,473	1,217,337	376,238	10,964,247	181,084	[3]12,013,495	28,136,189	[3]3,100	([5])	8,454	8,910,416	.....	134,717,580	34,157,399	1905
1906	11,500,410	14,787,763	10,120,935	33,098,598	1,213,548	327,582	7,673,477	4,397,050	[3]21,718,648	12,567,897	[3]3,500	([5])	[4]7,000	9,077,528	.....	126,493,936	92,444,735	1906
1907	11,211,606	12,207,448	9,095,296	39,748,375	820,844	331,851	5,128,037	24,281,973	2,409,521	12,322,696	[4]4,000	43,524,128	[4]9,339	5,000,221	.....	166,095,335	120,106,749	1907
1908	10,584,453	10,858,797	9,523,176	44,854,737	[4]727,767	379,653	3,283,629	33,686,238	1,801,781	11,206,464	[3]15,246	45,798,765	[4]17,775	5,788,874	.....	178,527,355	129,079,184	1908
1909	10,434,300	10,632,793	10,745,092	55,471,601	[4]639,016	310,861	2,296,086	30,898,339	1,263,764	9,534,467	[3]5,750	47,859,218	[3]20,056	3,059,531	.....	183,170,874	128,328,487	1909
1910	9,848,500	9,916,370	11,753,071	73,010,560	[4]468,774	239,794	2,159,725	33,143,362	1,128,668	8,899,266	[3]3,615	52,028,718	[3]115,430	6,841,395	.....	209,557,248	127,899,688	1910
1911	9,200,673	8,817,112	9,795,464	81,134,391	[4]472,458	226,926	1,695,289	31,317,038	1,278,819	9,526,474	[3]7,995	56,069,637	[3]186,695	10,720,420	.....	220,449,391	134,044,752	1911
1912	8,712,076	[3]8,969,007	12,128,962	[3]87,272,593	[3]848,368	206,052	970,009	28,601,308	1,592,796	11,735,057	([5])	51,427,071	1,572,306	9,263,439	.....	222,935,044	164,213,247	1912
1913	8,865,493	8,781,468	11,567,299	97,788,525	[4]524,568	188,568	956,095	23,893,899	2,375,029	15,009,478	[3]10,843	63,579,384	2,406,522	12,498,828	.....	248,446,230	237,121,388	1913
1914	9,109,309	8,536,352	9,680,033	99,775,327	[4]502,441	222,773	1,335,456	21,919,749	3,103,585	20,068,184	[3]7,792	73,631,724	3,560,375	14,309,435	.....	265,762,535	214,125,215	1914
1915	8,726,483	7,825,326	9,264,798	86,591,535	[4]437,274	208,475	875,758	19,041,695	2,823,487	24,942,701	[3]14,265	97,915,243	4,245,525	18,191,539	.....	281,104,104	179,462,890	1915
1916	8,466,481	7,744,511	8,731,184	90,951,936	1,203,246	197,235	769,036	17,714,235	8,738,077	27,644,605	.....	107,071,715	6,234,137	15,248,138	.....	300,767,158	330,899,868	1916
1917	8,612,885	7,750,540	8,379,285	93,877,549	3,100,356	121,231	759,432	15,776,860	36,536,125	32,413,287	.....	107,507,471	8,978,680	11,392,201	.....	[3]335,315,601	522,635,213	1917
1918	8,216,655	7,285,005	7,866,628	97,531,997	4,376,342	143,286	877,558	13,365,974	45,451,017	38,750,031	.....	103,347,070	12,596,287	16,042,600	.....	[3]355,927,716	703,943,961	1918
1919	9,441,936	8,243,592	9,032,688	101,221,784	5,027,904	241,680	929,780	12,436,000	34,769,100	85,312,000	.....	81,127,900	13,342,320	16,250,000	.....	377,719,000	867,753,379	1919
1920	8,360,400	7,412,000	8,173,050	105,668,000	8,692,600	110,000	932,000	10,772,000	38,500,000	96,000,000	.....	105,725,000	17,407,000	35,649,000	.....	443,402,000	1,360,000,000	1920
1921	8,414,000	7,333,000	8,003,000	114,709,000	8,963,000	108,200	1,163,000	10,044,000	36,232,000	103,322,000	.....	113,978,000	20,656,800	26,523,000	10,190,000	469,639,000	814,745,000	1921
1922	8,505,000	6,775,000	7,015,000	138,907,000	9,603,000	96,500	1,089,000	9,409,000	31,891,000	117,106,545	.....	147,414,000	29,177,265	33,889,480	15,869,635	556,207,725	895,111,000	1922
1923	8,590,000	7,123,000	6,452,000	258,387,119	8,110,140	95,500	1,049,000	8,724,000	29,406,925	125,991,628	.....	155,573,392	48,258,170	22,812,685	44,488,746	725,057,305	978,430,000	1923
1924	8,860,000	6,798,000	5,899,000	230,366,303	7,405,300	413,300	938,000	8,082,000	28,351,001	133,613,985	.....	170,180,463	42,480,700	20,595,136	46,480,542	710,463,430	1,024,683,000	1924
1925	9,596,000	7,226,000	5,859,000	231,768,982	6,835,700	1,123,000	830,000	7,260,000	34,497,756	150,010,406	.....	167,951,575	36,030,875	21,414,878	78,717,700	759,131,872	1,284,960,000	1925
1926	10,898,000	7,322,000	5,975,000	224,117,000	6,324,000	2,717,000	793,000	7,766,000	41,427,000	163,933,000	.....	179,272,000	33,830,000	22,803,000	59,229,000	766,504,000	1,447,760,000	1926
1927	11,768,000	7,593,000	6,023,000	231,196,000	6,779,000	2,831,000	852,000	6,994,000	41,069,000	217,389,000	.....	277,775,000	27,591,000	22,818,000	40,005,000	901,129,000	1,172,830,000	1927
1928	12,559,000	7,015,000	5,664,000	231,811,000	7,405,000	2,774,000	1,052,000	6,462,000	38,596,000	257,320,000	.....	249,857,000	26,419,000	21,847,000	32,096,000	901,474,000	1,054,880,000	1928
1929	15,197,000	6,743,000	5,574,000	292,534,000	7,794,000	2,358,000	981,000	6,319,000	42,813,000	296,876,000	.....	255,004,000	25,124,000	20,554,000	24,917,000	1,007,323,000	1,280,417,000	1929
1930	16,450,000	6,486,000	5,071,000	227,329,000	7,410,000	1,656,000	994,000	5,736,000	41,638,000	290,457,000	.....	216,486,000	31,406,000	23,272,000	19,702,000	898,011,000	1,070,200,000	1930
1931a	15,179,000	5,314,000	4,480,000	188,269,000	6,492,000	1,534,000	830,000	5,008,000	36,800,000	333,400,000	.....	180,920,000	32,821,000	21,885,000	14,910,000	850,101,000	510,060,000**	1931
Tot'l	932,021,050	570,354,987	376,702,398	3,677,530,764	115,044,832	27,377,550	118,538,364	403,237,380	765,655,330	2,893,807,669	†	3,723,789,987	451,537,153	492,210,240	386,583,223	15,085,641,141	16,709,428,747	T'tl

MICHIGAN

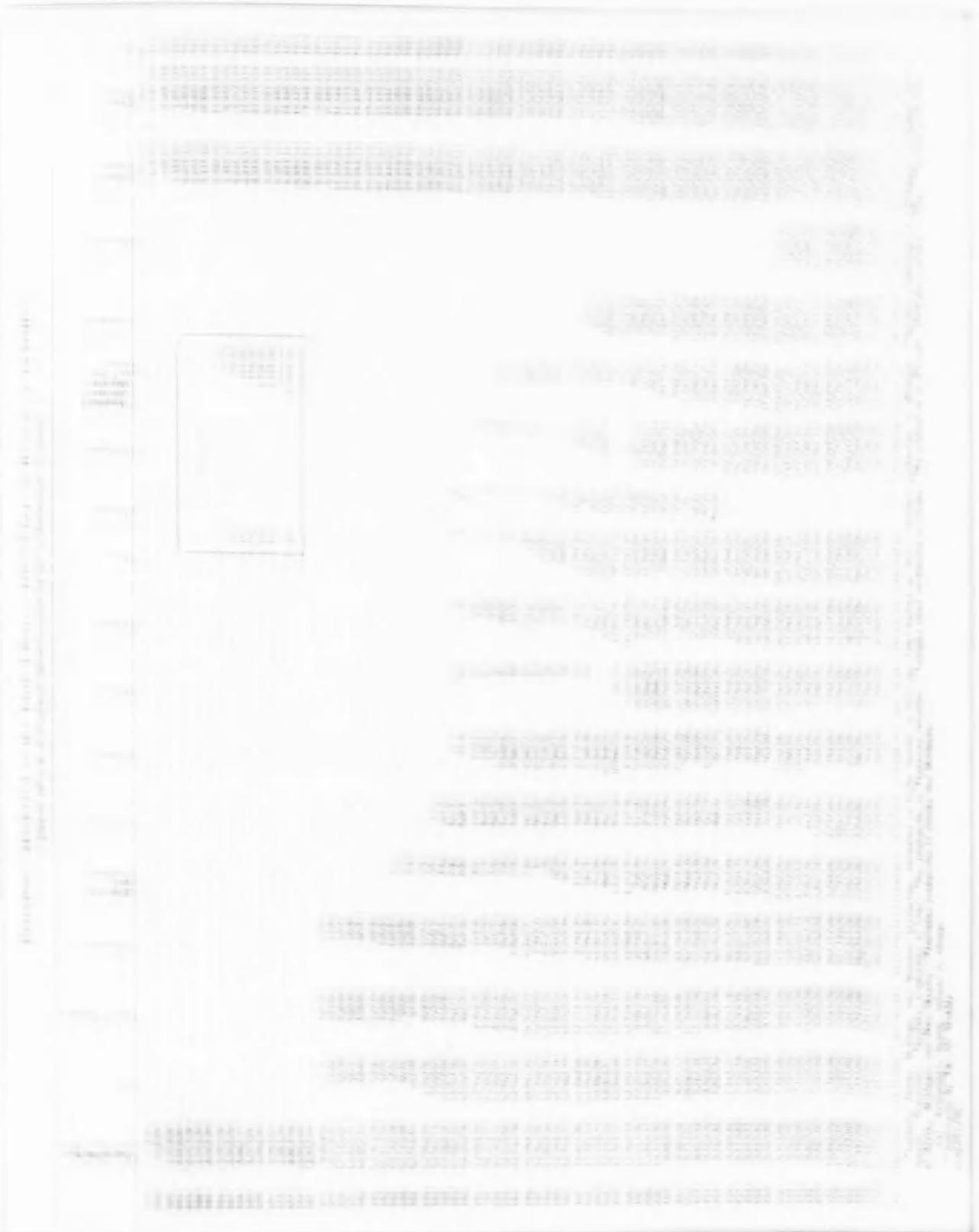
1925	4,000
1926	94,000
1927	439,000
1928	594,000
1929	4,528,000
1930	3,509,000
1931	3,725,000
Total	12,893,000

[1]Includes Alaska, Michigan and Missouri production, estimated at 10,300 barrels in 1917 and 7,943 barrels in 1918. [2]Includes production of Michigan. [3]Includes production of Oklahoma. [4]Included with Kansas. [5]Estimated. [6]Includes production of Utah. [7]No. production in Tennessee recorded. [8]Includes small production in Alaska. [9]No production in Missouri; Michigan included in Ohio. [10]Includes production of Alaska, Michigan and New Mexico. [11]Includes production of Alaska and Michigan.

(a) Preliminary figures, subject to change.

**Estimated by The Oil Weekly.

†148,067,000.



Monthly Petroleum Production in the United States, 1931, by States

(Thousands of Barrels—42 Gallons)

Figures Taken From "Petroleum Statistics", Department of Commerce, U. S. Bureau of Mines

STATE	January	February	March	April	May	June	July	August	September	October	November	December*	The Year
Arkansas	1,539	1,371	1,432	1,381	1,673	1,673	1,136	1,116	1,105	1,093	1,041	1,038	14,910
California	16,486	14,931	16,365	15,804	19,044	18,021	16,093	15,669	15,181	15,652	14,998	15,000	188,269
Colorado	139	126	135	128	137	131	134	124	112	143	115	110	1,534
Illinois	409	376	372	378	537	506	461	437	436	441	429	430	5,008
Indiana	73	70	62	69	93	90	74	67	70	70	67	61	830
Southwestern	69	66	58	66	87	85	72	64	67	67	64	53	787
Northeastern	4	4	4	3	6	5	2	3	3	3	3	3	43
Kansas	3,102	3,031	3,292	3,172	3,969	4,064	2,887	2,759	2,926	3,122	3,063	3,098	36,800
Kentucky	546	524	611	528	657	607	481	465	574	592	602	597	6,483
Louisiana	2,086	2,019	1,992	2,021	1,794	1,892	1,557	1,577	1,574	1,896	1,777	1,801	21,885
Gulf Coast	842	830	783	880	628	675	637	678	692	994	932	950	9,598
Rest of State	1,244	1,189	1,209	1,141	1,166	1,217	920	899	882	902	845	851	12,287
Michigan	261	243	291	261	356	282	347	289	357	406	425	410	3,725
Montana	256	237	255	256	269	265	234	221	247	247	192	210	2,863
New Mexico	1,185	1,087	1,181	1,197	588	733	1,301	1,330	1,286	1,335	1,324	1,290	15,206
New York	285	274	265	269	393	327	275	257	299	324	291	307	3,400
Ohio	496	447	480	465	587	574	410	372	438	451	400	430	5,314
Central and East	391	356	389	375	464	454	313	290	345	355	322	350	4,218
Northwestern	105	91	91	90	123	120	97	82	93	96	78	80	1,096
Oklahoma	15,168	14,102	17,286	17,750	20,959	19,382	16,207	8,853	8,393	13,617	16,257	17,098	180,920
Oklahoma City	2,588	2,618	4,489	5,431	3,582	3,148	4,878	734	647	3,631	5,359	6,100	48,161
Osage County	.....	.....	.....	.....	1,138	1,058	.....	.....	.....	.....	.....	2,196	2,196
Seminole	5,002	4,071	4,862	4,596	7,433	7,232	4,231	2,331	1,830	2,970	4,538	4,350	47,862
Rest of State	7,578	7,413	7,935	7,723	8,806	7,944	7,098	5,788	5,916	7,016	6,360	4,452	82,701
Pennsylvania	925	847	916	926	1,312	1,109	927	933	1,077	1,201	1,072	1,093	11,779
Tennessee	.....	2	1	1	1	1	1	.....	.....	.....	1	1	9
Texas	21,339	19,373	22,760	26,785	25,757	24,984	33,837	32,349	28,064	30,976	29,297	30,000	333,400
Gulf Coast	4,686	4,203	4,425	4,511	5,376	5,221	3,874	3,706	3,520	3,633	3,592	3,600	48,286
East Texas	.....	.....	2,887	7,533	.....	.....	16,099	14,268	10,290	12,825	12,019	12,750	109,650
West Texas	7,887	6,960	7,310	6,820	9,595	9,009	6,258	6,663	6,050	6,145	6,021	5,985	78,971
Rest of State	8,766	8,210	8,138	7,921	10,786	10,754	7,606	7,712	8,204	8,373	7,665	7,665	96,493
West Virginia	379	346	376	376	478	451	365	347	381	415	352	390	4,480
Wyoming	1,317	1,239	1,325	1,334	1,572	1,421	1,234	1,253	1,116	1,098	1,148	1,100	14,752
Salt Creek	803	734	801	778	914	873	743	724	699	695	664	658	8,811
Rest of State	514	505	524	556	658	548	491	529	417	403	484	442	5,941
United States	65,991	60,645	69,397	73,101	80,176	76,513	77,961	68,418	63,636	73,079	72,851	73,000	850,101

Petroleum Produced in the United States, 1931—Classified by Gravity (Approximate)

(Thousands of Barrels—42 Gallons)

Figures Taken From "Petroleum Statistics", Department of Commerce, U. S. Bureau of Mines

Light Crude, (24 Gr. (0.910) and Lighter)	58,562	54,306	62,616	66,466	71,460	67,950	72,062	62,511	**	**	**	**	765,091†
Heavy Crude (Heavier than 24 A.P.I. Gr.)	7,429	6,339	6,781	6,635	8,716	8,563	5,899	5,907	**	**	**	**	85,010†
Total	65,991	60,645	69,397	73,101	80,176	76,513	77,961	68,418	**	**	**	**	850,101†

*December production estimated by THE OIL WEEKLY.

**Bureau stopped gravity classification with August, 1931, report.

†Estimated on basis of figures for First eight months—Light crude represented 90% of total production.

California's Petroleum Production

FROM THE BEGINNING OF THE INDUSTRY TO DECEMBER 31, 1931, BY FIELDS

Compiled from data furnished by federal and state bureaus, the American Petroleum Institute, and the Independent Oil Producers Agency

(Barrels of 42 U. S. Gallons)

YEAR	Kern River	McKittrick	Midway	Sunset	Elk Hills	Coalinga	Lost Hills-Belridge	Santa Maria-Lompoc	Coyote	Montebello	Richfield	Whittier	Santa Fe Springs
Prior													
1876													
1877													
1878													
1879													
1880													
1881													
1882													
1883													
1884													
1885													
1886													
1887													
1888													
1889													
1890													
1891													
1892													
1893													
1894													
1895													
1896						14,119							
1897						70,140							
1898		10,000				154,000							
1899		15,000				439,372							
1900	826,775	80,000		12,500		547,960							
1901	3,278,840	430,450	4,235	188,600		525,433							
1902	8,988,046	619,296	3,048	167,558		571,233		94,188					
1903	16,342,099	1,353,206	27,305	352,565		2,138,058		204,890					
1904	17,226,240	1,856,225	910	390,425		5,097,853		700,450					
1905	15,253,845	1,373,030	18,530	419,212		8,882,125		3,402,800					
1906	12,825,166	680,756	11,800	307,550		8,401,105		4,799,411					
1907	12,346,014	2,415,840	149,944	704,805		8,996,268		8,249,236					
1908	13,803,579	3,076,300	434,578	1,463,510		10,725,795		8,699,350					
1909	14,508,242	5,807,360	2,234,455	1,999,701		15,406,619		8,017,455					
1910	14,776,435	5,471,613	11,174,207	9,218,904		18,646,570	4,900	7,607,830					
1911	14,078,890	5,477,532	21,584,602	5,559,069		18,311,251	168,410	7,465,074					
1912	12,446,445	5,094,465	25,948,980	5,590,824		19,546,122	2,680,961	6,801,966	1,359,303			747,439	
1913	9,980,940	4,496,842	33,040,129	5,984,651		18,604,626	5,274,553	5,817,711	3,777,359			690,133	
1914	7,030,545	3,820,857	37,479,228	12,546,615		15,925,887	4,830,921	4,303,080	6,998,659			636,789	
1915	8,034,974	3,552,801	33,311,486	6,006,607		13,548,159	4,318,550	4,536,840	6,610,508			758,163	
1916	8,402,525	3,230,644	32,156,818	6,768,658		14,381,493	4,852,431	4,422,410	8,588,699			1,014,667	
1917	8,495,610	3,252,544	29,487,812	7,072,333		15,938,543	6,295,329	5,798,070	11,458,471	789,635		1,156,752	
1918	7,921,515	3,050,627	27,439,993	6,608,940		16,283,066	5,420,079	7,143,750	12,514,598	6,839,267		1,046,467	
1919	7,563,025	2,810,848	26,133,048	5,589,885	281,019	16,385,610	4,554,821	6,030,910	10,240,359	12,100,784	965,408	1,001,048	
1920	7,456,515	2,607,240	25,217,420	5,423,781	7,275,809	15,464,198	4,139,767	5,928,060	8,732,435	11,124,585	2,565,346	842,184	
1921	6,715,680	2,056,101	24,172,350	4,613,965	18,085,425	12,340,637	3,261,281	5,563,324	7,419,050	9,065,723	8,206,962	735,376	208,216
1922	7,317,288	2,417,434	24,152,026	5,542,816	11,891,030	9,159,368	2,814,824	3,797,903	7,000,373	6,692,024	8,314,528	717,729	11,032,955
1923	6,816,134	2,191,702	27,803,281		8,174,371	5,210,839	1,843,483	3,003,672	2,447,825	4,075,669	6,121,335	645,219	79,781,275
1924	6,765,977	2,092,940	37,559,084		13,675,686	10,084,725	1,527,878	2,864,792	5,716,479	6,214,762	4,443,548	767,805	26,434,535
1925	5,951,217	2,036,736	37,391,003		11,833,366	7,811,886	1,736,960	2,652,427	7,188,569	6,895,949	4,258,973	741,090	19,090,766
1926	4,358,396	1,961,028	33,968,755		12,292,754	7,295,807	1,693,666	1,852,356	6,030,619	6,515,493	5,574,244	746,125	17,446,709
1927	6,098,585	1,855,605	31,670,705		10,073,075	7,154,600	1,515,300	1,999,050	5,146,865	5,498,255	7,884,045	660,505	15,153,575
1928	5,071,285		27,314,095		8,107,200	4,655,285	1,526,490		4,902,000	4,369,640	6,798,675		16,093,930
1929	6,089,344	1,708,520	25,310,976		6,353,035	3,558,843	1,602,425	1,535,816	4,176,035	3,657,922	5,776,258	563,790	76,477,464
1930			24,129,500										44,479,000
1931	‡	‡	18,773,200		‡	‡	‡	‡	‡	‡	‡	‡	24,211,400
Totals	276,770,171	76,763,272	710,456,976		108,052,761	312,277,585	60,163,929	123,292,821	120,408,206	83,839,708	60,909,322	13,471,281	330,409,823

Figures for MIDWAY and SUNSET fields are Combined after 1922

‡Included with "Others".

California's Petroleum Production

YEAR	Huntington Beach	Fullerton	Long Beach	Summerland	Newhall and Ventura Co.	Los Angeles and Salt Lake	Torrance	Wheeler Ridge	Dominguez	Rosecrans	Inglewood	Seal Beach	Others	Total
Prior					175,000									175,000
1876					12,000									12,000
1877					13,000									13,000
1878					15,227				Kettleman Hills	Playa Del Rey	Elwood-Goleta			15,227
1879					19,858									19,858
1880					40,552									40,552
1881					99,862									99,862
1882					128,636									128,636
1883					142,857									142,857
1884					262,000									262,000
1885					325,000									325,000
1886					377,145									377,145
1887					678,572									678,572
1888					690,333									690,333
1889					303,220									303,220
1890					307,360									307,360
1891					323,600									322,600
1892					385,049									385,049
1893					470,179									470,179
1894				1,800	570,469	196,094							14,715	783,078
1895				16,904	474,624	749,695							4,116	1,245,339
1896				39,792	298,866	902,868							2,135	1,257,780
1897		12,000		130,136	631,135	1,064,158							4,000	1,911,569
1898		60,000		132,217	763,871	1,126,000							3,000	2,249,088
1899		217,599		208,370	743,998	1,052,036							1,500	2,677,875
1900		511,550		183,486	628,734	1,280,000							248,945	4,319,950
1901		753,198		203,616	495,943	1,830,000								7,710,315
1902		1,103,793		136,252	646,496	2,027,000								14,356,910
1903		2,305,613		131,125	682,185	793,765							3,670	24,334,481
1904		2,224,550		120,506	650,779	1,241,304							39,392	29,548,634
1905		2,118,312		96,871	476,898	2,226,768							29,650	34,298,041
1906		2,434,512		72,810	404,379	2,675,650							10,000	32,623,229
1907		3,294,206		69,060	435,584	3,372,465							69,090	40,102,512
1908		4,273,314		67,862	498,015	5,138,959							125,475	48,306,737
1909		5,157,252		66,338	516,628	4,350,898							126,775	58,191,723
1910		6,281,221		74,725	652,575	3,729,618							58,970	77,697,568
1911		7,081,165		71,255	661,785	3,223,661							51,350	83,744,044
1912		5,813,037		65,715	859,885	3,073,427							45,870	90,074,439
1913		6,189,561		62,406	1,022,052	2,898,846							27,375	97,867,184
1914		6,495,100		55,743	968,421	2,504,475							27,375	103,623,695
1915		5,661,878		53,000	1,036,305	2,110,133							27,375	89,566,779
1916		5,076,306		56,775	1,122,033	1,721,453							27,450	91,822,362
1917		4,750,582		56,570	1,186,407	1,501,799							27,375	97,267,832
1918		4,403,281		54,613	1,386,518	1,397,781							27,375	101,637,870
1919		4,350,084		53,680	1,792,465	1,341,415							27,375	101,221,784
1920	38,116	5,391,497		54,910	2,122,449	1,311,264							25,610	105,721,186
1921	2,518,812	6,012,839	75,588	54,155	2,375,479	1,344,926							24,035	114,849,924
1922	11,169,383	4,512,974	18,560,595	48,339	3,015,877	1,258,287	190,785						20,338	139,626,876
1923	34,355,642	4,064,661	68,810,361	52,862	3,702,404	1,192,036	3,128,694	128,674	157,698				21,058	263,728,895
1924	17,547,916	4,115,144	60,119,659	53,240	4,049,533	907,418	17,517,908	345,427	6,813,489	623,847	10,405	3,100	21,006	230,366,303
1925	15,861,954	4,490,298	40,116,683	48,213	9,003,751	630,813	13,298,212	346,364	13,449,723	7,391,456	19,029,724		52,841	231,568,982
1926	19,064,814	6,987,489	37,931,964	46,865	16,999,876*	675,950	10,354,905	371,981	7,801,586	6,114,430	17,390,131	587,107	53,963	224,117,013
1927	26,344,695	7,008,935	34,541,665	49,475	20,006,350*	630,600	8,338,935	374,735	5,887,645	3,506,115	12,751,555	16,424,930	175,665	230,751,465
1928	19,642,280	5,743,045	62,467,105		18,920,940		6,454,065	329,485	4,267,010	2,392,325	10,762,795	12,436,370	9,728,585	231,982,605
1929	16,007,030	4,813,942	60,495,555	93,826	22,791,094	552,614	5,000,218	250,156	3,606,850	2,463,808	8,768,101	14,418,305	4,552,250	292,036,911
1930	11,098,700		36,792,750		17,594,900				3,639,800		6,946,500	8,103,300	52,864,800	230,576,350
1931	7,717,700	‡	29,936,100	‡	15,305,600	‡	‡	‡	4,152,600	‡	5,251,100	5,013,200	40,991,300	189,123,100
TOTALS	181,367,042	133,707,948	449,747,905	2,782,860	150,264,753	62,034,140	64,283,722	2,146,821	49,776,401	22,491,981	80,910,329	56,986,312	109,571,903	3,72?,659,531

Early production included under Newhall and Ventura County

	Kettleman Hills	Playa Del Rey	Elwood-Goleta
1929	1,951,786	25,121	9,435,819
1930	6,273,100	4,054,900	14,645,600
1931	17,488,700	9,704,900	10,480,600
Total	25,713,586	13,784,921	34,562,019

*Includes Ventura Avenue 17,808,705 barrels; Ventura-Newhall, 2,197,645.

‡Included with "Others".

Wyoming Production by Districts by Years, 1894-1931

(Thousands of Barrels of 42 U. S. Gallons)

Figures from Mineral Resources published by the Department of Commerce.

Year	Big Muddy	Byron Greybull Torchlight	Elk Basin	Ferris	Grass Creek	Hamilton Dome Worm Springs	Lance Creek	Lander-Dallas Derby Dome	Lost Soldier	Mule Creek	Osage	Pilot Butte	Poison Spider So. Casper	Rock River	Salt Creek	Teapot	Oregon Basin	La Barge	Other	Total
1894-1913	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4,389

1914	....	96	....	....	....	....	....	27	....	....	....	....	....	....	3,421	....	....	....	16	3,560
1915	†	141	....	....	99	....	....	28	....	....	....	....	....	....	3,971	....	....	....	7	4,246
1916	†	140	721	....	1,370	....	....	63‡	....	....	....	‡	....	....	3,933	....	....	....	7	6,234
1917	665	62	1,530	....	2,756	....	....	50‡	....	....	....	‡	....	....	3,911	....	....	....	4	8,978
1918	3,082	45	1,067	....	2,951	....	....	48	....	....	....	62	....	....	5,337	....	....	....	4	12,596
1919	3,104	27	740	¶	2,049	....	461	62	167¶	....	....	91	....	242	6,225	....	....	....	4	13,172
1920	2,083	69	732	¶	1,573	57	353	84	135¶	182	16	69	....	1,370	10,090	....	....	....	18	16,831
1921	1,927	90	681	¶	1,435	67	346	119	524¶	68	176	46	....	1,681	12,172	....	....	....	11	19,333
1922	1,506	70	652	¶	1,784	111	282	149	751¶	168	182	38	....	1,728	19,248	37	....	....	9	26,715
1923	1,527	57	634	¶	1,589	216	363	137	1,551¶	....	178	29	†	1,429	35,770	1,156	....	....	148	44,785
1924	1,272	33	409	42	1,113	239	786	133	1,733	178	146	29	229	1,181	30,874	1,004	....	....	97	39,490
1925*	1,119	47	313	35	1,224	207	316	104	1,708	111	138	19	228	1,134	21,349	642	....	....	126	28,820
1926*	1,882	†	267	†	1,085	†	85	†	1,774	†	†	†	†	1,032	18,165	445	....	....	1,563	26,298
1927*	1,036	†	344	†	975	†	306	†	1,148	†	†	†	†	1,008	14,605	247	....	....	1,318	20,987
1928*	977	18	374	19	858	292	200	86	1,429	122	149	15	350	921	14,041	6	....	....	1,495	21,361
1929*	898	....	281	....	812	....	101	....	1,291	....	....	....	....	858	11,769	....	1,458	667	1,488	19,623
1930*	737	...	273	...	761	...	64	...	1,217	...	...	...	...	796	10,569	...	1,326	717	1,527	17,991
1931*	661	...	240	8	744	92	83	303	1,287	...	423	4	168	709	8,734	8	499	470	278	14,714
Total	22,476	885	9,308	104	23,178	1,281	3,751	1,393	14,715	829	1,408	402	975	14,089	234,184	3,545	3,283	1,854	8,118	480,131

Year																				
1894	All	Sections	....	2	1904	All	Sections	....	12											
1895	"	"	....	3	1905	"	"	....	8											
1896	"	"	....	3	1906	"	"	....	†7											
1897	"	"	....	4	1907	"	"	....	‡9											
1898	"	"	....	5	1908	"	"	....	18											
1899	"	"	....	6	1909	"	"	....	‡20											
1900	"	"	....	5	1910	"	"	....	‡115											
1901	"	"	....	5	1911	"	"	....	1572											
1902	"	"	....	6	1912	"	"	....	1572											
1903	"	"	....	9	1913	"	"	....	2406											

†Estimated. ‡Includes Utah.

*Taken from weekly estimates of the A. P. I. as published in The Oil Weekly †Included under other. ‡Pilot Butte included with Lander-Dallas. ¶Ferris included with Lost Soldier.

Arkansas Production by Fields by Years, 1921-1931

(Thousands of Barrels of 42 U. S. Gallons)

Figures taken from Mineral Resources published by Department of Commerce

Year	Champagnolle	El Dorado	Smackover	Irma-Nevada	Stephens	Lisbon	Others	Total
1921	...	10,473	...	...	...	...	...	10,473
1922	...	10,592	2,107	...	13	...	...	12,712
1923	...	5,830	30,048	†	723†	...	...	36,610
1924	...	4,760	40,000	450	818	...	...	46,028
1925*	...	3,198	74,383	514	621	...	...	78,716
1926*	...	2,660	52,771	781	598	2,241	4	59,055
1927*	...	2,206	35,822	781	491	1,419	54	40,773
1928*	3,688	1,917	24,747	595	385	740	35	32,107
1929*	2,773	1,664	19,640	412	367	477	37	25,370
1930*	1,542	1,489	15,840	374	340	356	310	20,134
1931*	1,031	1,266	11,960	390	273	241	362	15,523
Total	9,034	46,055	307,318	4,297	4,638	5,474	802	377,501

*Based on A. P. I. estimates.
†Irma included with Stephens.

Louisiana Production by Fields by Years, 1905-1931

Figures taken from Mineral Resources of the United States published by the Department of Commerce.

(Thousands of Barrels of 42 U. S. Gallons)

YEAR	NORTHERN													YEAR
	Bellevue	Caddo	Cotton Valley	De Soto	Elm Grove	Haynesville	Homer	Red River (Bull Bayou Critchton)	Urania	Others	Total	Total State		
1905												8,910		1905
1906		3									3	9,076		1906
1907		50									50	4,999		1907
1908		499									499	5,786		1908
1909		1,028									1,028	2,957		1909
1910		5,090									5,090	6,839		1910
1911		6,995									6,995	10,718		1911
1912		7,177									7,177	9,261		1912
1913		9,781									9,781	12,496		1913
1914		7,572		3,834†				401				14,306		1914
1915		6,472		1,797				6,802		11	15,082	18,192		1915
1916		5,464		1,657				4,691		10	11,822	15,248		1916
1917		5,483		1,371				1,665		43	8,562	11,392		1917
1918		11,144		1,066				1,046		49	13,305	16,043		1918
1919		8,700¶		1,200¶			2,000¶	2,900¶		79	14,879	17,188		1919
1920		6,336		†††			21,508	5,923††			33,767	35,714		1920
1921		5,342		719		3,161	13,030	2,844		77	25,173	27,103		1921
1922	1,050	4,498		531	160	19,939	5,673	1,778			33,629	35,376		1922
1923	2,351	4,178		429	220	10,496	3,581	1,207		7	22,469	24,919		1923
1924	1,749	4,319	1,211	353	217	6,720	2,837	1,231			18,637	21,124		1924
1925	1,191	4,173	3,520	†††	244	4,739	2,400	1,526	18		17,811	21,374		1925
1926	816	4,598	2,896	†††	209	3,609	1,916	1,437	2,535	66	18,082	22,538		1926
1927	496	6,086	2,070	1,491	242	2,766	1,823	**	3,650	145	18,769	24,178		1927
1928	394	4,920	1,803	1,499	208	2,224	1,579	**	2,574	218	15,420	38,556		1928
1929	288	4,650	994	1,312	209	1,875	1,446	**	2,139	125	13,372	21,127		1929
1930	56	4,374	755	1,089	43	1,753	1,280		1,914	677	14,998	23,884		1930
1931	‡	3,352	347	904	‡	1,906	1,094	**	1,480	404	9,521	19,562		1931
Total	8,391	132,294	13,626	19,252	1,752	59,179	60,167	33,451	14,310	1,911	335,921	466,061		Total

Cartersville: 1930 806; 1931 429; Total 1235

Pleasant Hill: 1929 261; 1930 74; Total 335

Holly: 1930 303; 1931 193; Total 496

Zwolle: 1929 123; 1930 1,870; 1931 1,283; Total 3,276

†—Includes Sabine. ¶—Estimated. ††—De Soto included with Red River. **—Included under De Soto. ‡Included in "Others".

Louisiana Gulf Coast (Salt Dome Fields) by Years, 1905-1931

Figures taken from Mineral Resources of the United States published by the Department of Commerce.

(Thousands of Barrels of 42 U. S. Gallons)

YEAR	Anse La Butte	Bayou Bullion	East Hackberry	Edgerly	Lake Barre	Hackberry	Evangeline (Jennings)	Lockport	Sorrento	Sulphur	Sweet Lake	Vinton	Welsh	Others	TOTAL
1905	9						8,891						10		8,910
1906	25						9,025						23		9,073
1907	60						4,842						47		4,949
1908	145						5,11						31		5,287
1909	37						1,996						26		1,929
1910	44						1,625					26	54		1,749
1911	62						1,180					2,454	27		3,723
1912	25						1,105					932	22		2,085
1913	6						790					1,888	31		2,715
1914	18			586			412					1,465	18		2,499
1915	21			1,403			435					1,234		17	3,110
1916	13			1,252			517					1,540		4	3,426
1917	5			806			399					1,595		25	2,830
1918	3			512			369					1,839		15	2,738
1919				361			347					1,592		9	2,309
1920				379			232					1,333		3	1,947
1921	47			250			254					1,379			1,930
1922	36			125			191					1,395			1,747
1923	18			157			204					2,071			2,450
1924	12			166			213	128				1,968			2,487
1925	8			194			349	477				2,535			3,563
1926				336			419	1,348				2,344		9	4,456
1927				494			415	2,014				1,897		589	5,409
1928	17	217	1,176	422			373	1,489	282	932	659	1,642	30	473	7,716
1929	16	67	1,171	289	43	674	575	1,421	104	1,328	95	1,562	42	434	7,756
1930	11	77	841	194	399	427	600	1,162	29	1,351	191	1,825	53	761	8,537
1931		19†	1,383	129	1,037	252	252	1,963	34†	558	223†	2,017	‡	1,404*	10,041
Total	638	380	4,571	8,055	1,479	1,353	41,030	10,002	449	4,169	1,168	36,623	388	3,734	113,436

Port Barre: 1929 39; 1930 918; 1931 443; Total 1450

White Castle: 1929 18; 1930 298; 1931 327; Total 643

†First half only, Last half with "Others". *Includes production of Bayou Blue, Bayou Choctau, Black Bayou, Cameron Meadows, Iowa, Lake Grande Ecaille, Lake Pelto, Leesville, Stark's Dome, last half of year's output of Sorrento; Sweet Lake and Bayou Bouillon; also miscellaneous production classified by American Petroleum Institute as "Others". ‡In "Others"

Texas Production by Fields by Years, 1896-1931

(Figures in Thousands of Barrels of 42 U. S. Gallons)

YEAR	NORTH TEXAS										WEST AND WEST CENTRAL TEXAS				
	Burkburnett	Electra	Iowa Park K-M-A	Petrolia Clay County	North Young	Montague Cook Counties	Wichita-Willbarger Counties	Archer County Holliday	Others	Total	Brown County	Callahan County	Coleman County	Crane-Upton Counties	Crockett County
1896															
1897															
1898															
1899															
1900															
1901															
1902															
1903															
1904															
1905															
1906															
1907															
1908															
1909															
1910															
1911		a													
1912		a													
1913	a	a	a												
1914	a	a	a												
1915	a	a	a												
1916	a	a	a												
1917	a	a	a												
1918	a	a	a												
1919	20,918	4,461	178												
1920	29,890	3,681	1,311												
1921	18,562	4,206	1,417												
1922	11,487	6,606	937												
1923	9,174	8,856	793												
1924	7,109	7,333	1,339												
1925	5,207	6,294	1,300												
1926	4,581	5,693	1,692												
1927	4,814	5,052	1,211												
1928	3,992	4,512	1,260												
1929	3,327	4,524	1,942												
1930	2,871	4,019	1,843												
1931	2,345	3,198	1,319												
TOTAL	124,277	68,535	16,542	4,714	3,448	20,240	100,819	87,313	1,812	421,460	24,516	9,087	6,000	97,293	3,748

PANHANDLE DISTRICT

	1924	1925	1926	1927	1928	1929	1930	1931
All Sections	207	1,240						
Hutchinson County			24,000	33,389	13,795	9,479	7,488	3,851
Others			751	e8,024	10,511	22,166	23,246	18,331
TOTAL	207	1,240	24,751	41,413	24,306	31,645	30,734	22,182

a—Included under Wichita-Willbarger Counties. b—See Burkburnett and Electra. c—Includes South Vernon. d—Included in West Texas "Others." 3,235; Gray County, 4,091 and Wheeler County, 698.

YEAR	WEST AND CENTRAL WEST TEXAS—*Continued*													
	Desdemona	Eastland County	Howard County	Jack County	Jones County	Mitchell Scurry Counties	Strawn-Palo Pinto County	Reagan County	Moran-Shackelford County	Stephens County	Throckmorton County	Young County	Others	Total
1900														
1901														
1902														
1903														
1904														
1905														
1906														
1907														
1908														
1909														
1910														
1911														
1912														
1913														
1914														68
1916							175		136					311
1917		93					341		68	36				544
1918		3,107					186		55	790				4,620
1919	7,376	22,380					101		33	10,514				40,664
1920	5,098	10,141					512		49	23,852		135	3	39,989
1921	2,467	5,887					262		50	31,038		2,820	5	42,717
1922	3,489	4,787				34	602		309	14,925		3,723	10	28,139
1923	2,762	3,764		16		166	403		1,426	10,062		2,351	14	21,235
1924	2,573	2,627		11		469	323	1,079	1,268	7,129		598	11	16,418
1925	e	3,711		9		818	228	8,982	1,085	5,729	44	3,432	12	26,158
1926	702	2,133	34	f	45	288	159	11,243	2,602	4,414	65	2,767	3,265	32,899
1927	e	2,755	1,137	248	843	1,342	446	9,421	3,598	3,289	884	3,395	8,367	78,109
1928	e	2,775	4,803	540	887	1,106	160	6,856	3,434	2,750	344	3,063	845	140,758
1929	e	2,464	15,092	1,024	1,557	959	156	6,580	4,183	2,319	240	2,741	60,269	154,551
1930	e	1,981	11,240	1,141	586	808	203	7,275	2,484	2,055	295	4,883	5,266	128,231
1931	e	1,342	5,386	598	479	671	131	9,744	1,230	1,613	169	1,286	5,381	83,090
TOTAL	24,467	69,947	37,692	3,587	4,397	6,661	4,438	61,180	22,287	120,515	2,041	31,194	83,448	838,660

PECOS COUNTY

1927	5,220
1928	22,111
1929	41,317
1930 (h)	1,995
1931 (h)	1,165
TOTAL	71,808

WINKLER COUNTY

1927	3,046
1928	57,502
1929	50,222
1930	26,454
1931	15,449
TOTAL	152,673

YATES YIELD

1930	40,921
1931	27,096
TOTAL	68,017

e—Desdemona included with Eastland County. f—Jack County included in West Texas "Others". h—Balance of Pecos County, Yates Classed Separately During 1930.

YEAR	SOUTHWEST TEXAS											
	Chapman	Dale	Darst Creek	Laredo District	Luling	Somerset	Lytton Springs	Salt Flat	Rockdale Minerva	Thrall	Others	Total
1915										613	181	794
1916										433	123	556
1917										177	65	242
1918										137	158	195
1919						94				8	48	150
1920						245				8	60	313
1921						482				73	51	1,914
1922				766		955				51	48	606
1923				1,592	958	1,335			94	34	35	4,184
1924				1,965	10,210	1,023			230	25	218	13,441
1925				3,488	9,706	1,116	2,571			17	289	17,187
1926				4,346	7,832	789	1,955				316	15,238
1927				4,440	6,072	425	753				273	11,992
1928		365		2,791	4,911	266	457	215			251	9,257
1929		183		3,941	4,260	470	354	13,667			743	25,612
1930	1,214	105	10,747	4,027	3,589	503	308	7,582			500	28,532
1931	1,251	93	8,088	5,134	3,020	436	249	4,389			171	22,831
TOTAL	2,465	746	18,835	32,496	50,558	8,139	6,647	25,853	324	1,576	3,430	153,044

Texas Production by Fields by Years, 1896-1931

(Figures in Thousands of Barrels of 42 U. S. Gallons)

YEAR	EAST CENTRAL TEXAS								TEXAS GULF COAST					
	Mexia Currie-Rich-land	Worth-am	Corsi-cana	Powell	Boggy Creek	Nigger Creek	Marion County	Total	Batson	Big Creek	Barbers Hill	Boling	Blue Ridge	Damon Mound
1896			2		VAN ZANDT			2		ESPERSON				
1897			66		1929 133			66		1929 49				
1898			545		1930 7,638			545		1930 846				
1899			668		1931 5,547			668		1931 734				
1900			830	5	TOTAL 13,318			835		TOTAL 1,729				
1901			763	37	OTHERS			800		PETTUS				
1902			402	100	1930 21			502		1930 1,555				
1903			571	47	1931 8,500*			618	5	1931 2,414				
1904			374	129	TOTAL 8,521			503	10,905	TOTAL 3,969				
1905			313	131				444	3,791	REFUGIO				
1906			336	676				1,012	2,388	1928 57				
1907			276	597				873	2,167	1929 1,993				
1908			211	399				610	1,594	1930 11,788				
1909			181	383				564	1,206	1931 9,489				
1910			137	450			252	839	1,113	TOTAL 23,327				
1911			129	373			678	1,180	1,023					
1912			233	251			363	847	845					
1913			159	283			262	704	741					
1914			134	282			181	597	776					
1915			143	237			123	503	704					
1916			135	216			65	416	745					
1917			132	197			58	387	692					
1918				362g				362	655		20		h	487
1919				150				150	502		169		25	435
1920				530				530	484		136		173	1,259
1921	4,717			305				5,022	516		50		461	1,354
1922	35,120			246				35,366	430		236		416	945
1923	20,085			32,361				52,446	392	17	173		332	822
1924	15,615			33,501				49,116	542	299	72		318	545
1925	9,607	16,838		17,528				43,973	546	329	47	10	303	419
1926	5,558	3,250		10,562		1,791		21,161	481	523	146	1,121	483	344
1927	4,328	1,306		6,450	35	1,565k		13,649	532	1,223	68	791	1,122	336
1928	2,942	625		4,002	292	406		8,304	498	834	323	828	2,302	363
1929	2,299	501		2,865	1,125	164		7,087	506	1,444	1,487	609	1,207	245
1930	1,770	293		2,126	1,151	73		13,077	427	1,413	7,888	379	654	228
1931	1,332	149		1,401	649	31		17,603	1,972	849	8,217	280	397	314
TOTAL	103,373	22,989		123,902g	3,252	4,030	1,982	281,368	37,178	6,931	22,032	4,018	8,193	8,096

g—Corsicana and Powell combined. h—Blue Ridge included in Coastal "Others". k—Includes Cedar Creek.
*Includes Anderson and Smith Counties and wildcat production.

YEAR	TEXAS GULF COAST—*Continued*													
	North Dayton	Goose Creek	Hull	Humble	Matagorda County	Orange	Pierce Junction	Saratoga	Sour Lake	Spindle Top	South Liberty	West Columbia	Others	Total	Texas Total
1896															2
1897	NASH DOME					RACCOON BEND					SUGARLAND				66
1898	1926 207					1927 1					1928 390				545
1899	1927 394					1928 98					1929 4008				668
1900	1928 491					1929 2104					1930 4351				835
1901	1929 193					1930 4056				3,593	1931 4202			3,593	4,393
1902	1930 107					1931 2695			44	17,421			31	17,465	17,967
1903	1931 ‡					Total 8,954			8,848	8,601	Total 12,951			17,454	18,072
1904	Total 1,392				152			739	6,442	3,435				21,673	22,241
1905	60			18,066	46			2,922	3,369	1,600				29,854	30,400
1906	192			3,571	8			2,289	2,156	1,076				11,680	12,803
1907	120			2,931	4			2,199	2,355	1,613				11,389	12,345
1908	40			3,778	63			1,635	1,595	1,747			31	10,483	11,175
1909	18			3,237	29			1,184	1,704	1,388			87	8,853	9,531
1910	10			2,495	456			1,024	1,519	1,182			129	7,928	8,894
1911	4			2,426	562			926	1,365	966			2	7,274	9,523
1912	12	44		1,830	300			1,117	1,175	823			1	6,147	11,418
1913	13	250		1,505	295	18		938	1,348	716			2	5,826	15,007
1914	19	135		2,799	164	43		890	5,209	580			2	10,617	20,061
1915	10	119		11,062	137	22		864	4,115	388			47	17,468	25,156
1916	9	397		10,926	158	18		781	4,923	340			44	18,341	27,764
1917	10	7,300		7,390	128	7		683	4,763	308			159	21,440	32,437
1918	7	9,419	330	5,645	100	3		791	3,115	502		136	40	21,250	38,883
1919	1	7,288	1,476	3,271	53	4		616	2,740	459		8,129	24	25,192	91,984
1920	1	5,666	4,469	3,692	76	4		914	2,073	324		10,563	5	29,839	105,738
1921	30	5,647	8,718	3,098	89	705	1,404	937	1,750	321		12,573	3	37,656	112,048
1922	39	5,248	6,819	2,553	35	5,492	1,145	662	1,738	295		11,632		37,685	121,797
1923	75	6,251	7,732	2,449	39	5,312	333	701	2,092	309		6,599		33,628	135,569
1924	27	4,020	7,287	2,245	73	4,182	163	545	1,650	365		4,964		27,297	133,519
1925	6	3,661	7,184	1,752	34	5,024	292	587	1,585	429	4,551	4,230		30,989	149,419
1926	h	3,281	6,662	1,545	45	3,746	907	455	1,815	13,370	2,117	3,330	714	41,085	164,858
1927	h	2,979	6,220	1,158	h	1,831	3,101	405	1,634	21,584	1,152	3,535	1,451	49,122	226,303
1928	210	2,552	4,167	683	109	1,466	3,980	383	1,235	14,021	1,438	2,946	335	39,614	252,681
1929	196	2,140	3,417	3,043		1,059	5,096	346	983	9,923	2,208	2,382	4,987	43,837	298,848
1930	386	1,690	3,183	6,355		820	3,969	391	826	5,955	1,577	1,882	3,969	64,293	294,941
1931	225	1,501	2,176	3,085		638	2,972	362	685	3,089	716	1,492	4,678*	53,1o1	328,920
TOTAL	1991	69,588	69,833	112,590	3,155	30,394	23,362	26,286	74,851	116,720	13,759	74,393	16,710	762,153	2,746,806

h—Dayton included with Coastal "Others".
*Includes Clear Lake, 642; Fannett, 187; Hankamer, 803; Manvel, 46; Moss Bluff, 112; North Dayton, 225; Orchard, 499; Port Neches, 490; Somerville, 495; All others, 1179.
‡Included with "Others".

1931 Annual Field Statistical Review 1931

Wells Drilled for Oil and Gas in the United States—1859-1931

YEAR	Wells Completed	Producers	Gas Wells	Failures	Initial Production	Average Per Well
1859—1922[1]	615,353	481,863	14,542[2]	118,948	18,842,525[3]	.....
(Following figures taken from weekly statistics as reported to and published in THE OIL WEEKLY.)						
1923	20,513	13,407	1,892	5,214	5,920,019	395
1924	21,713	14,311	2,250	5,152	3,248,211	227
1925	25,406	16,162	2,644	6,600	4,640,924	183
1926	28,995	17,787	2,848	8,360	3,876,811	218
1927	22,301	13,396	2,586	6,319	4,628,246	345
1928	19,964	10,982	2,733	6,249	6,406,370	583
1929	23,463	13,125	3,109	7,229	6,404,145	488
1930	19,848	10,745	3,006	6,097	10,443,833	972
1931	11,716	6,618	2,090	3,008	31,590,024	4,773
Total.....	809,272	598,396[5]	37,700[4]	173,176	96,001,108[6]	.....

[1]Taken from Annual Bulletins of the United States Bureau of Mines.
[2]Gas wells during the period prior to 1916 were included with producers.
[3]Initial production prior to 1916 not available.
[4]Includes only gas wells completed since 1916.
[5]Includes gas wells completed prior to 1916.
[6]Includes only initial production reported since 1916.

Comparative Summary of Field Operations—1931 and 1930

All field statistics compiled from well records published in The OIL WEEKLY.
Production statistics compiled from weekly estimates of The American Petroleum Institute.

Recapitulation—United States

State or Section	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production (a)	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Oklahoma.....	1,056	3,292	486	1,975	193	367	377	950	2,026,598	6,009,681	1,736½	6,788	178,718,150	216,486,000
Kansas.....	463	1,008	226	411	125	172	112	425	176,600	208,265	1,637¼	1,046½	39,246,050	41,638,000
Texas (Outside of Gulf Coast).....	5,620	5,122	4,272	2,599	238	407	1,110	2,118	28,445,717	1,725,408	4,293½	6,610¾	272,952,460	229,391,000
Gulf Coast.....	614	1,412	304	855	11	44	299	513	239,081	489,830	273½	1,169½	62,993,450	69,676,000
North Louisiana...	255	725	57	220	75	246	123	259	20,093	52,386	1,635¾	4,871¼	11,423,100	14,662,000
Arkansas.....	79	196	31	105	8	18	40	73	3,740	6,123	65½	151	15,522,550	19,702,000
Eastern States.....	3,020	6,451	875	3,348	1,360	1,661	785	1,442	52,336	94,926	2,966¼	2,455	41,306,700	46,058,000
Rocky Mountains.	270	653	82	340	80	93	108	220	143,875	1,081,005	764	**	34,703,600	33,069,000
California.....	339	989	285	892	.....	.....	54	97	481,984	776,209	.....	.....	189,026,400	227,329,000
Total.....	11,716	19,848	6,618	10,745	2,090	3,006	3,008	6,097	31,590,024	10,443,833	13,372¼	23,090	845,892,460†	898,011,000

*Millions of cubic feet.
**Not available.
(a)Bureau of Mines' final figures.
†Indicated total Production on Bureau of Mines' Basis—870,101,000 Barrels.

EASTERN STATES

New York

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Allegany.....	81	236	55	228	19	2	7	6	256	905	71¼	¾
Dundee.....	...	1	...	...	...	1	...	...	...	...	...	12
Elmira.....	2	...	...	...	1	...	1	...	...	...	½	...
Erie.....	2	...	...	...	2	...	...	...	...	...	1	...
Olean.....	1	...	...	...	1	...	...	...	...	...	1	...
Potter.....	1	...	...	...	1	...	...	...	...	...	6	2
Schuyler.....	12	1	...	...	11	1	1	...	...	...	49½	...
Steuben.....	4	...	...	...	3	...	1	...	...	...	21	...
Wayne.....	31	...	...	...	23	...	8	...	...	...	103¾	...
Wellsboro.....	3	...	...	...	3	...	...	...	...	...	30	...
Yates.....	7	...	...	...	4	...	3	...	...	...	21	...
Total.....	144	238	55	228	68	4	21	6	256	905	325	14¾

*Millions of cubic feet.

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Pennsylvania

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Allegheny	11	28	7	14	2	8	2	6	27	167	1¼	8
Beaver	5	12	3	5	1	...	1	7	5	14	¼	....
Bradford	179	966	174	963	...	2	5	1	574	4,257	...	½
Butler	37	112	12	64	14	17	11	31	130	218	9¼	15¾
Cattaragus	1	...	...	...	1	...	...	...	...	...	1	...
Center-Middle	34	47	33	39	1	5	...	3	104	139	1¼	3½
Clarion-Venango	78	236	41	166	26	42	11	28	109	358	14	28
Farmington	4	...	...	...	3	...	1	...	...	...	73	....
Fayette	...	1	...	...	...	1	...	...	...	...	...	¾
Greene	42	77	7	10	28	41	7	26	56	102	22½	29¼
Lawrence	7	...	...	...	3	...	4	...	...	...	49	....
Ontario	2	...	...	...	1	...	1	...	...	...	½	....
Potter	1	...	...	...	1	...	...	...	...	...	8	....
Schuyler	1	...	...	...	1	...	...	...	...	...	3¾	....
Somerset	6	4	...	...	5	1	1	3	...	...	5	1
Tioga-Wayne	134	...	...	...	80	...	54	...	...	...	662¼	...
Washington	43	33	6	13	19	13	18	7	71	154	53½	8½
Wellsboro	4	...	...	...	2	...	2	...	...	...	9½	...
Total	589	1,516	283	1,247	188	130	118	112	1,076	5,409	914	95¼

West Virginia

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Boone	64	97	1	13	59	81	4	3	2	120	40½	72¾
Braxton	...	5	...	...	...	4	...	1	...	...	...	3½
Cabell	19	37	...	...	18	35	1	2	...	...	8¾	23½
Calhoun	104	118	9	24	82	75	13	19	33	140	46¾	67¾
Clay	10	49	2	29	8	14	...	6	7	618	3½	10¼
Coleman	...	2	...	1	...	1	...	...	...	5	...	1
Doddridge	10	26	2	15	7	9	1	2	6	67	3¼	3
Fayette	6	5	...	...	2	4	4	1	...	...	½	2
Gilmer	30	48	...	10	21	21	9	17	...	105	9¾	27¼
Hancock	1	6	...	4	...	1	1	1	...	17	..	1¼
Harrison	14	10	4	3	9	7	1	...	6	14	6	8¾
Jackson	4	13	1	6	2	...	1	7	5	38	½	...
Kanawha	39	67	1	9	32	51	6	7	5	77	16¼	47½
Lewis	4	12	...	2	3	9	1	1	..	14	2¼	3¼
Lincoln	20	37	...	4	19	33	1	...	...	11	6¾	9¾
Logan	3	8	...	...	..	5	3	3	...	...	..	6¼
Marion	12	31	1	...	10	27	1	4	10	...	5¾	31
Marshall	17	28	1	1	15	26	1	1	5	2	16½	32
Mason	2	6	1	1	...	4	1	1	4	1	...	5
Mingo	23	16	1	4	21	10	1	2	50	44	12¼	14½
Monongalia	12	25	3	6	8	10	1	9	28	36	5½	8
Monroe	...	1	...	...	...	...	...	1	...	...	...	...
Nichols	1	1	...	1	...	...	1	...	...	8	...	...
Parson	...	1	...	1	...	...	...	...	...	2	...	...
Pleasants	10	12	6	8	2	...	2	4	14	36	½	...
Putnam	2	18	...	1	1	15	1	2	...	1	¼	16½
Raleigh	1	1	...	...	1	...	...	1	...	...	¾	...
Ritchie	31	76	12	24	9	29	10	23	109	177	5	14¼
Roane	19	73	1	33	12	34	6	6	5	1,039	5¾	28½
Tyler	10	14	1	3	5	4	4	7	8	17	2	1
Upshur	...	4	...	1	...	3	...	...	...	1	...	1½
Washington	...	1	...	1	...	...	...	...	...	3	...	...
Wayne	12	23	4	2	7	18	1	3	7	3	3¾	18½
Wetzel	26	28	3	6	21	12	2	10	15	66	17½	11
Wirt	9	13	3	6	1	3	5	4	14	20	¼	2
Wood	10	35	9	15	...	5	1	15	25	86	...	1¾
Wyoming	1	1	...	...	1	1	...	...	...	...	¼	2
Total	526	948	66	234	376	551	84	163	358	2,768	220¾	473½

Illinois

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Clark	...	8	...	4	...	...	...	4	...	52	...	...
Clinton	2	2	...	...	...	...	2	2	...	...	...	...
Crawford	12	56	6	37	...	2	6	17	66	542	...	½
Cumberland	1	2	...	1	...	...	1	1	...	1	...	...
Edgar	...	1	...	1	...	...	...	...	...	1	...	...
Effingham	1	...	...	...	...	...	1	...	...	...	...	...
Lawrence	...	25	...	14	...	...	...	11	...	616	...	...
Macoupin	1	...	...	...	...	...	1	...	...	...	...	...
McDonough	...	4	...	2	...	...	...	2	...	3	...	...
Madison	2	1	1	1	...	...	1	...	2	12	...	...
Marion	2	2	1	2	...	...	1	...	15	16	...	...
Monroe	4	10	...	3	...	...	4	7	...	13	...	...
Perry	1	...	...	...	...	...	1	...	...	...	...	...
Randolph	...	3	...	...	...	...	...	3	...	...	...	...
St. Clair	10	59	3	37	...	...	7	22	11	1,569	...	...
Wabash	4	32	2	19	...	...	2	13	8	439	...	..
Total	40	205	13	121	...	2	27	82	102	[illegible]	...	½

*Millions of cubic feet.

Southeastern Ohio

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Columbiana	1	2	...	...	1	...	...	2	..	...	¼	
Jefferson	10	15	2	11	1	...	7	4	...	83	¼	...
Monroe	39	101	12	30	18	35	9	36	64	180	5	10½
Morgan	53	106	5	27	40	58	8	21	45	120	12¼	23
Noble	34	57	10	23	15	14	9	20	22	78	5	9
Washington	74	150	30	66	20	31	24	53	117	410	9½	10¾
Total	211	431	59	157	95	138	57	136	259	882	32¼	49¼

Central Ohio

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Ashland	46	125	12	34	16	40	18	51	78	357	12¼	50¾
Ashtabula	5	8	...	...	3	3	2	5	...	...	3	8½
Athens	49	138	7	22	27	73	15	43	119	97	16	44
Belmont	37	31	3	5	24	17	10	9	9	85	12¼	7¼
Brown	...	1	...	...	...	...	...	1	...	...	...	...
Carroll	1	1	...	1	...	...	1	...	...	5	...	...
Coshocton	17	35	7	16	4	13	6	6	162	703	6¼	10⅜
Cuyahoga	1	8	...	3	...	2	1	3	...	18	...	2
Delaware	...	1	...	...	...	...	...	1	...	...	...	...
Fairfield	20	18	1	1	16	8	3	9	10	6	4	7¼
Gallia	...	1	...	...	...	...	...	1	...	...	...	...
Geauga	2	...	...	...	...	...	2	...	...	...	...	...
Guernsey	16	50	4	33	8	7	4	10	83	1,319	3	4½
Harrison	...	6	...	5	...	...	...	1	...	17	...	...
Hocking	13	47	2	15	5	14	6	19	8	491	2	14¼
Holmes	8	31	2	9	3	10	3	12	65	545	1	18½
Huron	1	...	...	...	1	...	...	...	...	...	¼	...
Jackson	...	5	...	...	...	4	...	1	...	...	...	2
Knox	16	60	2	8	7	33	7	19	10	267	3½	40½
Lake	1	1	...	...	...	...	1	1	...	...	...	...
Lawrence	1	5	...	1	1	3	...	1	...	60	1¾	...
Licking	22	101	3	72	12	16	7	13	182	3,920	4¼	5½
Loraine	36	46	...	...	27	25	9	21	...	...	40	36½
Mahoning	...	1	...	1	...	...	...	...	...	1	...	...
Medina	102	72	62	26	9	22	31	24	1,260	457	3¼	32½
Meigs	50	40	1	11	38	15	11	14	1	49	19	7¼
Morrow	1	1	...	...	...	...	1	1	...	...	...	...
Muskingum	51	157	14	75	22	48	15	34	892	5,739	18	45½
Perry	31	106	8	41	13	34	10	31	205	1,962	10¼	28¾
Pickaway	2	...	...	...	1	...	1	...	...	...	¼	...
Pike	...	5	...	...	...	3	...	2	...	...	...	¾
Richland	7	14	...	...	5	7	2	7	...	...	2	6
Scioto	1	2	...	...	...	...	1	2	...	...	...	...
Stark	74	23	3	...	65	15	6	8	15	...	159¼	54
Summit	18	57	...	...	15	47	3	10	...	...	27	106½
Trumbull	...	1	...	...	...	...	...	1	...	...	...	...
Tuscarawas	7	44	...	13	4	23	3	8	...	1,004	2¼	21
Vinton	10	19	...	11	8	4	2	4	...	62	5½	3¼
Wayne	19	48	2	3	7	30	10	15	59	91	3	19¼
Total	665	1,309	133	406	341	516	191	387	3,158	17,255	358¾	577¾

Northwestern Ohio

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Allen	1	15	1	15	...	...	...	...	15	387	...	...
Auglaize	1	7	1	3	...	...	...	4	2	18	...	...
Crawford	1	1	...	...	...	...	1	1	...	...	...	...
Darke	2	...	...	...	2	...	...	...	...	...	1¼	...
Erie	1	...	...	...	1	...	...	...	...	...	¼	...
Hancock	3	23	3	16	...	3	...	4	91	542	...	1
Hardin	28	40	10	9	14	28	4	3	259	201	5	12½
Henry	8	2	...	1	8	...	...	...	...	30	5	...
Huron	1	3	...	...	1	3	...	...	...	...	1	¾
Logan	2	1	...	...	2	1	...	...	...	...	½	½
Lucas	7	6	4	6	1	...	2	...	72	37	½	...
Mercer	3	9	1	5	2	3	...	1	1	32	½	½
Ottawa	2	5	1	3	1	2	...	...	2	8	¼	½
Paulding	4	...	...	...	4	...	...	...	...	...	1	...
Sandusky	2	18	...	9	1	5	1	4	...	84	¼	1½
Seneca	37	44	1	13	32	10	4	21	5	207	8	4¾
Shelby	2	4	2	3	...	...	...	1	15	30	...	...
Wood	2	11	1	7	1	...	...	4	10	221	½	
Wyandot	20	7	1	...	12	6	7	1	15	...	6	3¾
Total	127	196	26	90	82	61	19	45	487	1,576	30	62¾

*Millions of cubic feet.

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Michigan

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Allegany	2	2	...	1	...	...	2	1	...	1	...	...
Alpena	...	1	...	...	...	...	...	1	...	...	...	...
Barren	...	3	...	...	...	...	...	3	...	...	...	...
Barry	...	1	...	...	...	...	...	1	...	...	...	...
Branch	...	1	...	...	...	...	...	1	...	...	...	...
Calhoun	...	1	...	...	...	...	...	1	...	...	...	...
Cass	...	5	...	1	...	...	...	4	...	15	...	...
Clare	4	6	...	...	2	1	2	5	...	...	5¼	½
Gratiot	6	2	...	...	5	...	1	2	...	...	6	...
Isabella	32	129	17	97	9	11	6	21	6,510	18,924	28½	55
Ingham	...	1	...	...	...	...	...	1	...	...	...	...
Iosco	...	1	...	...	...	...	...	1	...	...	...	...
Kalkaskia	...	2	...	...	...	...	...	2	...	...	...	...
Kent	...	1	...	...	...	...	...	1	...	...	...	...
Lake	...	2	...	...	...	...	...	2	...	...	...	...
Lenawee	1	1	...	...	1	...	...	1	...	...	¼	...
Livingston	1	4	...	...	...	1	1	3	...	...	...	¼
Manistee	...	6	...	...	...	4	...	2	...	...	...	3½
Mason	...	2	...	...	...	2	...	...	...	...	...	4
Mecosta	2	1	...	...	...	...	2	1	...	...	...	...
Midland	21	25	19	21	...	...	2	4	22,465	5,985	...	...
Missaukee	2	...	...	...	2	...	...	...	...	...	2½	...
Montcalm	...	2	...	...	...	...	...	2	...	...	...	...
Monroe	3	...	1	...	½	...	...	...	2	...	½	...
Muskegon	8	26	...	16	1	4	7	6	...	1,220	¼	8½
Newyago	...	3	...	...	...	...	...	3	...	...	...	...
Oceana	1	4	1	...	...	...	...	4	10	...	...	...
Osceolo	...	1	...	...	...	...	...	1	...	...	...	...
Ottawa	...	3	...	...	...	...	...	3	...	...	...	...
Presque Isle	...	1	...	...	...	...	...	1	...	...	...	...
Saginaw	...	2	...	1	...	...	...	1	...	35	...	...
Shiawassee	...	1	...	1	...	...	...	...	...	10	...	...
St. Clair	...	1	...	...	...	...	...	1	...	...	...	...
Van Buren	...	2	...	...	...	...	...	2	...	...	...	...
Washtenau	2	...	...	...	1	...	1	...	...	...	¼	...
Wayne	14	...	...	...	5	...	9	...	...	...	1¼	...
Wexford	...	1	...	...	...	...	...	1	...	...	...	...
Total	99	244	38	138	28	23	33	83	28,987	26,190	44¾	71¾
Grand Total Eastern States	3,020	6,451	875	3,348	1,360	1,661	785	1,442	52,336	94,926	2,966½	2,455

Total Crude Production Eastern States—1931.....41,306,700 Barrels
Total Crude Production Eastern States—1930(a).....46,058,000 Barrels

(a) Bureau of Mines Figures.

Indiana

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Adams	...	4	...	3	...	...	...	1	...	55	...	...
Allen	1	...	...	...	1	...	...	...	...	...	1¼	...
Blackford	1	...	1	...	...	...	...	...	3	...	...	...
Clay	...	1	...	...	...	...	...	1	...	...	...	...
Crawford	1	2	1	...	...	1	...	1	20	...	...	½
Daviess	10	8	...	2	4	2	6	4	...	25	3	2
Dearborn	2	...	...	...	1	...	1	...	...	...	¾	...
Decatur	...	2	...	...	...	2	...	...	...	...	...	½
DuBois	...	2	...	...	...	...	...	2	...	...	...	...
Floyd	...	4	...	...	...	...	...	4	...	...	...	...
Gibson	3	11	...	5	...	2	3	4	...	191	...	1
Green	3	...	...	...	3	...	...	...	...	...	½	...
Hancock	1	3	...	...	1	3	...	...	...	...	½	...
Hamilton	...	2	...	1	...	...	...	1	...	15	...	...
Harrison	1	3	...	...	1	3	...	...	...	...	¼	1¼
Henry	1	...	...	...	1	...	...	...	...	...	¼	...
Huntington	2	2	2	...	...	1	...	1	105	...	...	1
Jay	4	6	2	4	1	1	1	1	43	72	¼	¼
Knox	13	2	1	1	7	...	5	1	1	2	9	...
Lawrence	...	1	...	...	...	...	...	1	...	...	...	...
Madison	2	1	...	...	2	1	...	...	...	...	1	½
Marion	...	1	...	...	...	1	...	...	...	...	...	½
Monroe	7	5	...	...	4	1	3	4	...	...	4¼	1
Morgan	...	2	...	...	...	...	...	2	...	...	...	...
Perry	17	20	7	9	...	2	10	9	465	65	...	1
Pike	23	73	...	34	5	23	18	16	...	1,180	5	36¾
Porter	1	...	...	...	...	...	1	...	...	...	...	...
Randolph	...	2	...	...	...	...	2	...	...	...	...	...
Rush	1	...	...	...	1	...	...	...	...	...	½	...
Spencer	10	13	7	7	...	...	3	6	215	194	...	...
Steuben	...	1	...	1	...	...	...	...	...	2	...	...
Sullivan	18	11	2	2	6	3	10	6	7	66	3	1½
Vanderburg	9	1	5	...	...	1	4	...	32	...	...	¼
Vigo	6	13	3	13	...	...	3	...	215	824	...	...
Warrick	5	2	...	...	...	...	5	2	...	...	...	...
Washington	...	1	...	...	...	...	...	1	...	...	...	...
Total	142	199	31	82	38	47	73	70	1,106	2,691	29¼	49¾

*Millions of cubic feet.

Kentucky

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Allen	...	1	...	1	...	...	...	...	...	200	...	...
Barren	24	21	3	4	15	13	6	4	125	104	15¾	10¼
Bath	1	...	...	...	1	...	...	...	...	...	¾	...
Bell	1	2	...	...	1	2	...	...	...	...	1½	5
Breckenridge	1	2	1	...	...	...	...	2	5	...	...	...
Butler	...	1	...	...	...	...	...	1	...	...	...	...
Caldwell	3	...	2	...	1	...	...	...	150	...	1½	...
Christian	3	1	...	...	2	1	1	...	...	...	¼	10
Carroll	2	...	...	...	2	...	...	...	...	...	5½	...
Clay	3	7	...	...	3	5	...	2	...	...	1¾	2½
Cumberland	1	3	...	2	1	...	...	1	...	65	1	...
Daviess	39	175	17	106	1	8	21	61	917	4,110	½	6½
Estill	7	14	4	9	1	...	2	5	21	49	½	...
Floyd	4	...	...	...	4	...	...	...	...	...	6½	...
Grayson	1	...	...	...	1	...	...	...	...	...	¾	...
Green	10	...	2	...	6	...	2	...	50	...	5½	...
Hancock	29	37	16	20	6	7	7	10	657	543	5	18½
Hart	126	76	62	48	23	12	41	16	12,850	11,870	20¼	12
Henderson	15	115	10	63	3	15	2	37	275	1,381	¾	9¼
Hopkins	2	2	...	...	2	1	...	1	...	...	3¼	3½
Johnson-Magoffin	4	24	2	22	1	...	1	2	8	112	½	...
Jackson	...	...	...	...	...	...	...	...	...	...	...	...
Knox	4	3	1	...	3	3	...	...	25	...	4¼	10¼
Lawrence	4	28	2	28	...	...	2	...	8	184	...	...
Lee-Owsley	4	7	4	7	...	...	...	...	28	88	...	...
Leslie	2	...	...	...	...	...	2	...	...	...	...	...
Logan	1	...	...	...	...	...	1	...	...	...	...	...
McCracken	1	...	...	...	1	...	...	...	...	...	½	...
McCreary	...	4	...	3	...	...	...	1	...	19	...	...
McLean	23	52	16	31	1	1	6	20	767	1,623	¼	¼
Metcalf	2	11	...	...	2	10	...	1	...	...	1	10½
Meade	1	...	...	...	1	...	...	...	...	...	½	...
Morgan	...	1	...	1	...	...	...	...	...	2	...	...
Muhlenberg	15	11	4	6	4	2	7	3	70	420	3¾	9
Ohio	44	436	20	248	10	61	14	127	521	13,043	7¼	48½
Perry	1	1	...	...	1	1	...	...	...	...	¼	5
Pike	...	1	...	...	...	1	...	...	...	...	...	¼
Powell	...	2	...	2	...	...	...	...	...	9	...	...
Union	2	2	...	1	...	...	2	1	...	30	...	...
Warren	3	20	...	7	1	...	2	13	...	105	¼	...
Wayne	3	19	2	8	...	...	1	11	9	27	...	...
Webster	14	4	3	...	11	4	...	...	130	...	15	3
Wolfe	1	1	...	1	1	...	...	...	...	3	¼	...
Total	401	1,087	171	618	110	148	120	321	16,547	33,986	107	156½

Missouri

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Prodsuction Gas*	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
St. Louis	4	4	...	...	...	...	4	4	...	...	...	...
St. Charles	...	2	...	...	...	...	...	2	...	...	...	...
Total	4	6	...	...	...	...	4	6	...	...	...	...

Alabama

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Wildcats	3	4	...	...	...	...	3	4	...	...	...	...
Total	3	4	...	...	...	...	3	4	...	...	...	...

Mississippi

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Alcorn	1	...	...	...	...	...	1	...	...	...	...	...
Clarke	1	...	...	...	...	...	1	...	...	...	...	...
Attala	1	...	...	...	...	...	1	...	...	...	...	...
Covington	4	...	...	...	...	...	4	...	...	...	...	...
Grenada	2	...	...	...	...	...	2	...	...	...	...	...
Hinds	26	...	...	...	17	...	9	...	...	...	355¼	...
Madison	1	...	...	...	...	...	1	...	...	...	...	...
Monroe	1	...	...	...	1	...	...	...	...	...	½	...
Neshoba	1	...	...	...	...	...	1	...	...	...	...	...
Rankin	21	...	...	...	16	...	5	...	...	...	548½	...
Smith	1	...	...	...	...	...	1	...	...	...	...	...
Warren	2	...	...	...	...	...	2	...	...	...	...	...
Wesbster	1	...	...	...	...	...	1	...	...	...	...	...
Wildcats	6	55	...	...	...	29	6	26	...	...	...	877½
Total	69	55	...	...	34	29	35	26	...	...	904¼	877½

*Millions of cubic feet.

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ROCKY MOUNTAIN STATES

Wyoming

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Big Muddy	5	...	4	...	...	...	1	...	615	.....	.....	.....	683,950	737,600
Bryon	1	...	1	...	...	...	...	...	1,200	.....	.....	.....	.....	.....
Elk Basin	3	...	1	...	1	...	1	...	50	.....	9¼	.....	240,600	273,400
Frannie	3	...	2	...	...	...	1	...	100	.....	.....	.....	.....	.....
Garland	4	...	3	...	1	...	...	...	4,000	.....	55	.....	.....	.....
Grass Creek	...	...	...	...	...	...	...	...	.....	.....	.....	.....	755,950	761,850
Hamilton Dome	1	...	1	...	...	...	...	...	125	.....	.....	.....	.....	.....
La Barge	1	...	1	...	...	...	...	...	30	.....	.....	.....	462,300	717,050
Lance Creek	4	...	2	...	1	...	1	...	300	.....	9¼	.....	96,300	64,100
Lander	4	...	3	...	...	...	1	...	260	.....	.....	.....	.....	.....
Lost Soldier	...	...	...	...	...	...	...	...	.....	.....	.....	.....	1,325,750	1,217,450
Midway	1	...	1	...	...	...	...	...	100	.....	.....	.....	.....	.....
Oregon Basin	...	...	...	...	...	...	...	...	.....	.....	.....	.....	499,450	1,326,950
Osage	32	...	20	...	...	...	12	...	2,575	.....	.....	.....	.....	.....
Pilot Butte	1	...	...	...	1	...	...	...	.....	.....	.....	.....	.....	.....
Poison Spider	2	...	2	...	...	...	...	...	250	.....	.....	.....	.....	.....
Rock River	...	...	...	...	...	...	...	...	.....	.....	.....	.....	694,800	796,300
Salt Creek	3	...	2	...	...	...	1	...	50	.....	.....	.....	8,722,550	10,569,750
Others	5	...	1	...	...	...	4	...	.....	.....	.....	.....	1,330,300	1,527,300
Total	70	139	44	89	4	17	22	33	9,655	18,930	73½	.....	14,811,950	17,991,750

Montana

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Buckley-Border	3	...	2	...	...	..	1	...	450	.....	.....	.....	.....	.....
Cat Creek	2	...	1	...	...	...	...	...	45	.....	.....	.....	367,700	427,050
Cut Bank	21	...	...	...	19	...	3	...	.....	.....	320	.....	.....	.....
Glendive-Baker	32	...	...	...	27	...	5	...	.....	.....	210	.....	.....	.....
Hardin	4	...	...	...	3	...	1	...	.....	.....	1¾	.....	.....	.....
Kevin-Sunburst	18	...	7	...	6	...	5	...	140	.....	14	.....	1,626,300	1,972,850
Pondera	1	...	1	...	...	...	...	...	50	.....	.....	.....	552,100	717,550
Whitlash	4	...	...	...	4	...	...	...	.....	.....	32	.....	.....	.....
Others	19	...	1	...	...	...	18	...	40	.....	.....	.....	374,800	22,650
Total	104	188	12	78	59	39	33	71	725	5,515	577¾	.....	2,920,900	3,140,100

Colorado

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Toal Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Berthoud	5	...	1	...	3	...	1	...	40	.....	1¾	.....	.....	.....
Boulder	2	...	1	...	...	...	1	...	10	.....	.....	.....	.....	.....
Florence	9	...	7	...	...	...	2	...	280	.....	.....	.....	134,650	198,800
Fort Collins	...	...	...	...	...	...	...	...	.....	.....	.....	.....	398,550	489,450
Greasewood	4	...	2	...	...	...	2	...	1,600	.....	.....	.....	.....	.....
Iles	1	...	1	...	...	...	...	...	300	.....	.....	.....	.....	.....
Moffats	...	...	...	...	...	...	...	...	.....	.....	.....	.....	322,000	401,350
Rangely	2	...	1	...	...	...	1	...	10	.....	.....	.....	.....	.....
Others	23	...	...	...	...	...	23	...	.....	.....	.....	.....	696,900	558,050
Total	46	61	13	16	3	9	30	36	2,240	1,140	1¾	.....	1,552,100	1,647,650

New Mexico

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Artesia	...	...	...	...	..	..	...	...	.....	.....	.....	.....	212,250	259,950
Cap Rock	3	...	...	...	2	..	1	...	.....	.....	9	.....	.....	.....
Eddy County	...	...	...	...	..	..	...	...	.....	.....	.....	.....	93,650	14,450
Hobbs	8	...	6	...	..	..	2	...	131,000	.....	.....	.....	12,792,800	3,006,500
Hogback	4	...	2	...	1	..	1	...	100	.....	8	.....	171,350	159,350
Lea County	...	...	...	...	...	..	...	...	.....	.....	.....	.....	1,784,450	6,209,650
Rattlesnake	5	...	2	...	1	..	2	...	80	.....	12	.....	330,400	408,100
San Jaun	9	...	...	...	6	..	3	...	.....	.....	62	.....	.....	.....
Table Mesa	5	...	2	...	2	..	1	...	60	.....	14	.....	33,750	36,600
Others	4	...	...	...	2	..	2	...	.....	.....	6	.....	.....	198,750
Total	38	203	12	152	14	13	12	38	131,240	1,051,845	111	.....	15,418,650	10,293,350

*Millions of cubic feet.

Other Mountain States

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Utah	4	...	1	...	..	..	3	...	15	.....	.....	.....	.....	.....
Idaho	2	...	...	...	..	..	2	...	.....	.....	.....	.....	.....	.....
South Dakota	2	...	...	...	..	..	2	...	.....	.....	.....	.....	.....	.....
Arizona	4	...	...	...	..	..	4	...	.....	.....	.....	.....	.....	.....
Total	12	62	1	5	...	15	11	42	15	3,575	.....	.....	.....	.....
Grand Total Mountain States	270	653	82	340	80	93	108	220	143,875	1,081,005	764	.....	34,703,600	33,072,850

MID-CONTINENT

Kansas

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Augusta-Fox-Bush	1	...	...	...	1	..	...	...	.....	.....	2¾	.....	1,020,350	1,043,150
Barber	2	10	...	...	1	3	1	7	.....	.....	5	40½	.....	.....
Barton	2	2	1	...	..	..	1	2	480	.....	.....	.....	.....	.....
Butler	12	91	7	38	1	..	4	53	835	4,480	2	.....	.....	.....
Chase	4	14	...	3	2	1	2	10	.....	65	9¼	¾	.....	.....
Chautauqua	4	13	...	3	2	5	2	5	.....	175	2½	8½	.....	.....
Churchill	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,114,950	1,447,700
Clay	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
Clark	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Coffee	2	21	1	7	..	..	1	14	50	475	.....	.....	.....	.....
Cowley	37	65	12	22	7	21	18	22	1,551	2,871	39¼	54	.....	.....
Cove	2	...	...	...	..	..	2	...	.....	.....	.....	.....	.....	.....
Dickinson	...	3	...	...	..	..	...	3	.....	.....	.....	.....	.....	.....
Douglas	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
Edwards	...	5	...	2	..	2	...	1	.....	280	.....	13½	.....	.....
El Dorado	...	...	...	...	..	..	...	...	.....	.....	.....	.....	.....	.....
Towanda	...	...	...	...	..	..	...	...	.....	.....	.....	.....	5,069,750	5,014,450
Elk	2	20	1	5	..	1	1	14	135	950	.....	3	.....	.....
Ellis	5	20	3	12	..	..	2	8	655	2,564	.....	.....	.....	.....
Ellsworth	8	3	2	1	6	..	...	2	2,155	1,800	.....	.....	.....	.....
Florence-Covert	...	...	...	...	..	..	...	...	.....	.....	.....	.....	268,250	294,700
Ford	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Franklin	3	3	...	...	..	3	3	...	.....	.....	.....	11	.....	.....
Graham	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
Grant	...	1	...	...	..	1	...	...	.....	.....	.....	3	.....	.....
Greenwood	24	135	12	81	..	4	12	50	1,540	10,460	.....	5	5,565,200	6,899,163
Harper	1	1	...	...	..	..	1	1	.....	.....	.....	.....	.....	.....
Harvey	8	15	2	1	..	..	6	14	1,000	275	.....	.....	.....	.....
Haskell	1	...	...	...	1	..	...	...	.....	.....	13½	.....	.....	.....
Hodgeman	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Kingman	2	3	1	...	..	..	1	3	215	.....	.....	.....	.....	.....
Kiowa	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Labette	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Leavenworth	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Lyon	2	12	...	2	..	..	2	10	.....	40	.....	.....	.....	.....
McPherson	178	166	109	119	58	13	11	24	145,484	131,444	1,113¼	156½	.....	.....
Marion	6	22	4	9	..	1	2	12	345	905	.....	1½	.....	.....
Marshall	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Morris	12	8	...	1	9	1	3	6	.....	20	.....	½	.....	.....
Morton	3	27	...	...	3	27	...	...	.....	.....	24	179	.....	.....
Ness	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Osborne	...	3	...	...	..	..	...	3	.....	.....	.....	.....	.....	.....
Oxford	...	...	...	...	..	..	...	...	.....	.....	.....	.....	775,200	.....
Pawnee	1	2	...	...	..	..	1	2	.....	.....	.....	.....	.....	.....
Peabody-Elbing	...	...	...	...	..	..	...	...	.....	.....	.....	.....	715,800	1,031,800
Pratt	1	2	...	...	..	..	1	2	.....	.....	.....	.....	.....	.....
Rainbow Bend	...	...	...	...	..	..	...	...	.....	.....	.....	.....	480,400	393,300
Raymond	...	...	...	...	..	..	...	...	.....	.....	.....	.....	169,400	.....
Reno	11	16	7	2	4	2	...	12	880	1,697	44¼	24¾	.....	.....
Rice	23	34	12	11	2	1	9	22	5,075	7,895	35¼	10	.....	.....
Riley	...	3	...	...	..	..	...	3	.....	.....	.....	.....	.....	.....
Ritz	...	...	...	2	..	..	...	...	.....	.....	.....	.....	2,667,800	.....
Rooks	1	5	...	2	..	..	1	3	.....	340	.....	.....	.....	.....
Rush	3	6	1	...	2	1	...	5	400	.....	67	24	.....	.....
Russell	16	20	13	11	..	..	3	9	2,000	1,756	.....	.....	1,170,100	1,203,400
Saline	2	4	...	...	..	..	2	4	.....	.....	.....	.....	.....	.....
Sedgewick	50	97	36	60	..	..	14	37	13,735	36,417	.....	.....	5,971,350	7,878,300
Seward	...	1	...	...	..	1	...	...	.....	.....	.....	1	.....	.....
Shawnee	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Smith	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
Stafford	...	4	...	1	..	..	...	3	.....	340	.....	.....	.....	.....
Stanton	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Stevens	26	79	...	...	26	78	...	1	.....	.....	279¼	484	.....	.....
Sumner	4	35	2	13	..	4	2	18	65	2,857	.....	25	.....	.....
Trego	...	3	...	...	..	..	...	3	.....	.....	.....	.....	.....	.....
Voshell	...	...	...	...	..	..	...	...	.....	.....	.....	.....	5,623,650	3,970,200
Washington	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Woodson	...	19	...	5	..	2	...	12	.....	150	.....	½	.....	.....
Others	...	...	...	...	..	..	...	...	.....	.....	.....	.....	8,633,850	12,663,750
Total	463	1,008	226	411	125	172	112	425	176,600	208,256	1,637¼	1,046½	39,246,050	42,831,313

*Millions of cubic feet.

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Oklahoma

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Allen	...	...	...	...	..	..	...	...	.....	.....	.....	.....	3,779,550	6,534,500
Asher	...	...	...	...	..	..	...	...	.....	.....	.....	.....	237,000	606,350
Atoka	3	1	...	...	..	..	3	1	.....	.....	.....	.....	.....	.....
Beckham	2	5	...	1	1	2	1	2	.....	100	1½	50	.....	.....
Blackwell	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,074,650	1,142,050
Bowlegs	...	...	...	...	..	..	...	...	.....	.....	.....	.....	4,423,450	6,728,700
Braman	...	...	...	...	..	..	...	...	.....	.....	.....	.....	716,050	1,168,150
Bristow-Slick	...	...	...	...	..	..	...	...	.....	.....	.....	.....	4,472,450	5,575,900
Bryan	2	2	...	...	..	..	2	2	.....	.....	.....	.....	.....	.....
Burbank	...	...	...	...	..	..	...	...	.....	.....	.....	.....	4,671,750	5,760,750
Caddo	2	48	1	30	..	6	1	12	1,195	9,392	.....	128¾	.....	.....
Canadian	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Carr City	...	...	...	...	..	..	...	...	.....	.....	.....	.....	4,273,300	3,240,150
Carter	36	90	27	71	..	1	9	18	8,920	42,734	.....	¾	.....	.....
Cherokee	1	2	...	...	..	..	1	2	.....	.....	.....	.....	.....	.....
Cimarron	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Cleveland	3	5	1	2	..	..	2	3	450	38,513	.....	.....	.....	.....
Coal	3	3	...	...	1	..	2	3	.....	.....	1½	.....	.....	.....
Comanche	5	7	...	1	..	..	5	6	.....	1	.....	.....	.....	.....
Cotton	4	87	1	68	..	1	3	18	15	4,969	.....	3	.....	.....
Creek	123	241	46	120	29	36	48	85	45,75	10,808	66	189¾	.....	.....
Cromwell	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,890,200	2,606,850
Cushing	...	...	...	...	..	..	...	...	.....	.....	.....	.....	4,561,400	4,984,750
Davenport	...	...	...	...	..	..	...	...	.....	.....	.....	.....	328,250	383,800
Duncan	...	...	...	...	..	..	...	...	.....	.....	.....	.....	2,459,650	3,029,800
Earlsboro	...	...	...	...	..	..	...	...	.....	.....	.....	.....	5,604,400	10,224,000
East Earlsboro	...	...	...	...	..	..	...	...	.....	.....	.....	.....	5,155,600	10,807,400
East Little River	...	...	...	...	..	..	...	...	.....	.....	.....	.....	2,046,150	5,399,850
East Seminole	...	...	...	...	..	..	...	...	.....	.....	.....	.....	564,000	1,083,400
Fox-Graham	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,429,400	1,639,700
Garber	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,364,650	1,654,350
Garfield	4	10	1	4	1	2	2	4	100	1,540	4	4½	.....	.....
Garvin	1	5	...	...	..	..	1	5	.....	.....	.....	.....	.....	.....
Grant	...	17	...	2	..	8	...	7	.....	41	.....	76½	.....	.....
Grady	11	22	...	...	9	16	2	6	.....	.....	137	178½	.....	1,216,800
Greer	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Harmon	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Harper	1	1	...	...	..	1	1	...	.....	.....	.....	12	.....	.....
Haskell	11	2	...	...	4	..	7	2	.....	.....	3¼	.....	.....	.....
Healdton	...	...	...	...	..	..	...	...	.....	.....	.....	.....	3,997,450	4,276,500
Hewitt	...	...	...	...	..	..	...	...	.....	.....	.....	.....	2,160,050	2,532,550
Hubbard	...	...	...	...	..	..	...	...	.....	.....	.....	.....	362,600	527,400
Hughes	14	50	2	7	7	21	5	22	195	1,857	281½	369½	.....	.....
Jefferson	8	20	2	16	..	..	6	4	300	2,003	.....	.....	.....	.....
Johnson	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Kay	5	27	...	9	1	5	4	13	.....	509	¼	11	.....	.....
Kingfisher	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Kiowa	3	19	1	4	..	..	2	15	2	39	.....	.....	.....	.....
Konawa	...	...	...	...	..	..	...	...	.....	.....	.....	.....	3,150,950	4,962,500
Latimer	8	8	...	1	5	4	3	3	.....	20	17	61	.....	.....
Le Flore	7	4	...	...	3	3	4	1	.....	.....	3	6¾	.....	.....
Lincoln	15	37	10	12	3	4	2	21	23,795	32,724	42	29¾	.....	.....
Little River	...	...	...	...	..	..	...	...	.....	.....	.....	.....	7,557,850	12,156,350
Logan	...	15	...	9	..	1	...	5	.....	7,187	.....	2	1,314,450	2,387,350
Love	3	...	...	...	..	..	3	...	.....	.....	.....	.....	.....	.....
McIntosh	5	15	...	...	2	7	3	8	.....	.....	5	4¼	.....	.....
McClain	...	2	...	1	..	..	...	1	.....	45	.....	.....	.....	.....
Marshall	18	100	5	58	..	..	13	42	85	3,588	.....	.....	.....	.....
Maud	...	...	...	...	..	..	...	...	.....	.....	.....	.....	807,200	1,694,000
Mission	...	...	...	...	..	..	...	...	.....	.....	.....	.....	2,384,050	3,626,500
Murry	1	1	...	...	..	..	1	1	.....	.....	.....	.....	.....	.....
Muskogee	97	224	14	56	38	45	45	123	327	3,639	269¾	75	.....	.....
Noble	6	16	1	4	3	6	2	6	2,740	1,400	24½	93¼	.....	.....
North Okmulgee	...	...	...	...	..	..	...	...	.....	.....	.....	.....	2,822,100	3,776,400
Okfuskee	21	106	6	51	3	17	12	38	210	3,353	10½	336½	.....	.....
Oklahoma	249	598	241	564	2	20	6	14	1,893,015	5,231,396	150	3,727	44,367,550	33,637,800
Okmulgee	59	117	14	49	16	32	29	36	305	932	34¾	170¼	.....	.....
Osage	46	185	12	99	7	28	27	58	323	8,873	23½	81¼	7,737,100	9,356,350
Papoose	...	...	...	...	..	..	...	...	.....	.....	.....	.....	723,650	978,500
Pawnee	33	94	6	49	4	9	23	36	57	3,388	7¼	29¼	.....	.....
Payne	10	51	5	27	1	5	4	19	410	9,744	5½	30½	.....	.....
Pearson	...	...	...	...	..	..	...	...	.....	.....	.....	.....	212,200	250,910
Pittsburg	27	28	...	...	22	23	5	5	.....	.....	254¼	213¾	.....	.....
Pontotoc	15	75	11	60	1	1	3	14	1,832	7,541	2	8	.....	.....
Pottawatomie	22	161	14	131	..	4	8	26	12,570	95,397	.....	21½	.....	.....
Rogers	1	1	...	...	..	..	1	1	.....	.....	.....	.....	.....	.....
St. Louis	...	...	...	...	..	..	...	...	.....	.....	.....	.....	6,972,850	11,625,000
Sasakna	...	...	...	...	..	..	...	...	.....	.....	.....	.....	907,100	2,920,850
Scholem-Alechem	...	...	...	...	..	..	...	...	.....	.....	.....	.....	4,545,250	4,842,450
Searight	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,515,050	3,114,150
Seminole	65	518	38	394	7	21	20	103	87,508	482,423	260¾	609½	4,246,050	6,762,050
Sequoyah	1	2	...	...	..	1	1	1	.....	.....	.....	1¼	.....	.....
South Earlsboro	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,930,850	2,216,000
South Okmulgee	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,714,350	2,388,250
Stephens	32	108	10	46	4	8	18	54	1,220	4,961	30	116	.....	.....
Texas	4	3	...	...	4	2	...	1	.....	.....	58½	8¼	.....	.....
Tillman	...	3	...	...	..	..	...	3	.....	.....	.....	.....	.....	.....
Thomas	...	...	...	...	..	..	...	...	.....	.....	.....	.....	195,200	221,050
Tonkawa	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,976,200	2,545,050
Tulsa	27	48	14	15	4	4	9	29	394	399	9¾	9	.....	.....
Wagoner	39	96	3	14	11	23	25	59	55	204	33½	92	.....	.....
Washita	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
West Asher	...	...	...	...	..	..	...	...	.....	.....	.....	.....	2,082,150	1,496,050
Wewoka	...	...	...	...	..	..	...	...	.....	.....	.....	.....	7,861,650	1,447,950
Woods	...	3	...	...	..	..	...	3	.....	.....	.....	.....	.....	.....
Woodward	...	4	...	...	..	..	...	4	.....	.....	.....	.....	.....	.....
Yale-Jennings	...	...	...	...	..	..	...	...	.....	.....	.....	.....	2,163,550	2,828,050
Others	...	...	...	...	..	..	...	...	.....	.....	.....	.....	15,924,900	21,749,900
Total	1,056	3,292	486	1,975	193	367	377	950	2,026,598	6,009,681	1,736½	6,788	178,718,150	216,890,360

*Millions of cubic feet.

CALIFORNIA

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Athens-Rosecrans	1	8	1	8	..	..	...	...	40	4,700	.....	.....	.....	.....
Belridge	7	3	5	3	..	..	2	...	9,225	2,845	.....	.....	.....	.....
Capitan	1	...	1	...	..	..	...	...	100	.....	.....	.....	.....	.....
Dominguez	10	...	10	...	..	..	...	...	13,550	.....	.....	.....	4,152,600	3,639,800
Elwood-Goleta	6	30	6	30	..	..	...	...	15,400	120,708	.....	.....	10,480,600	14,645,600
Fruitvale	1	8	1	8	..	..	...	...	400	3,100	.....	.....	.....	.....
Huntington-Beach	...	11	...	11	..	..	...	...	.....	1,165	.....	.....	7,717,700	11,098,700
Inglewood	4	2	4	2	..	..	...	...	750	550	.....	.....	5,251,100	6,946,500
Kern Front	4	17	4	17	..	..	...	...	950	2,675	.....	.....	.....	.....
Kettleman-Hills	26	8	26	8	..	..	...	...	291,461	29,976	.....	.....	17,488,700	6,273,100
Long Beach	74	236	74	236	..	..	...	...	27,750	177,609	.....	.....	29,936,100	36,792,750
Maricopa Flat	1	42	1	42	..	..	...	...	300	36,465	.....	.....	.....	.....
McKittrick	...	1	...	1	..	..	...	...	.....	35	.....	.....	.....	.....
Midway-Sunset	4	9	3	9	..	..	1	...	1,000	2,300	.....	.....	18,773,200	24,129,500
Montebello	...	2	...	2	..	..	...	...	.....	425	.....	.....	.....	.....
Mt. Poso	5	11	5	11	..	..	...	...	780	1,985	.....	.....	.....	.....
Newhall	1	5	1	5	..	..	...	...	60	890	.....	.....	.....	.....
Orella-Capitan	2	4	2	4	..	..	...	...	320	650	.....	.....	.....	.....
Piru	...	1	...	1	..	..	...	...	.....	275	.....	.....	.....	.....
Playa Del Rey	71	127	71	127	..	..	...	...	43,460	69,785	.....	.....	9,704,900	4,054,900
Potrero	4	17	4	15	..	..	...	2	3,800	10,825	.....	.....	.....	.....
Richfield	1	12	1	12	..	..	...	...	150	1,975	.....	.....	.....	.....
Rincon	3	5	3	5	..	..	...	...	1,425	1,525	.....	.....	.....	.....
Round Mountain	3	17	3	17	..	..	...	...	700	4,355	.....	.....	.....	.....
Santa Barbara Mesa	3	2	3	2	..	..	...	...	1,050	1,200	.....	.....	.....	.....
Santa Fe Springs	7	243	7	243	..	..	...	...	1,925	222,026	.....	.....	24,211,400	44,479,000
Seal Beach	2	4	2	4	..	..	...	...	75	1,225	.....	.....	5,013,200	8,103,300
Sespe	2	...	2	...	..	..	...	...	1,000	.....	.....	.....	.....	.....
South Mountain	...	1	...	1	..	..	...	...	.....	125	.....	.....	.....	.....
Santa Maria	...	1	...	1	..	..	...	...	.....	50	.....	.....	.....	.....
Summerland	...	4	...	4	..	..	...	...	.....	640	.....	.....	.....	.....
Venice	...	19	...	19	..	..	...	...	.....	24,062	.....	.....	.....	.....
Ventura	34	33	34	33	..	..	...	...	41,775	46,075	.....	.....	15,305,600	17,594,900
West Coyote	5	3	5	3	..	..	...	...	1,198	883	.....	.....	.....	.....
Wildcats	57	103	6	8	..	..	51	95	19,320	5,105	.....	.....	.....	.....
Others	...	...	...	...	..	..	...	...	.....	.....	.....	.....	40,991,300	52,864,800
Total	339	989	285	892	..	..	54	97	481,984	776,209	.....	.....	189,026,400	230,622,850

Arkansas

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Champagnolle	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,030,800	1,542,900
El Dorado	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,265,750	1,489,250
Lisbon	...	...	...	...	..	..	...	...	.....	.....	.....	.....	241,050	356,300
Nevada	...	...	...	...	..	..	...	...	.....	.....	.....	.....	390,050	374,200
Ouachita	5	48	4	37	1	3	...	8	82	1,630	¼	33¾	.....	.....
Smackover-Light	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,270,600	1,872,050
Smackover-Heavy	...	...	...	...	..	..	...	...	.....	.....	.....	.....	10,689,200	13,968,750
Stephens	...	...	...	...	..	..	...	...	.....	.....	.....	.....	273,400	340,750
Union	16	65	14	48	1	3	1	14	1,321	2,504	¼	49	.....	.....
Wildcats	58	83	13	20	6	12	39	51	2,337	1,989	65	68¼	.....	.....
Others	...	...	...	...	..	..	...	...	.....	.....	.....	.....	361,700	310,200
Total	79	196	31	105	8	18	40	73	3,740	6,123	65½	151	15,522,550	20,254,400

North Louisiana

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Bellevue	...	...	...	...	..	..	...	...	.....	.....	.....	.....	.....	56,800
Bossier	8	57	...	25	7	18	1	14	.....	2,158	48¼	130¼	.....	.....
Caddo	10	53	7	39	..	4	3	10	403	2,313	.....	40	3,352,500	4,374,150
Carterville	...	...	...	...	..	..	...	...	.....	.....	.....	.....	428,850	806,250
Claiborne	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Cotton Valley	...	1	...	...	..	1	...	...	.....	.....	.....	32½	376,950	755,050
De Sota-Red River	2	2	1	...	..	..	1	2	40	.....	.....	.....	904,100	1,089,100
Elm Grove	...	...	...	...	..	..	...	...	.....	.....	.....	.....	.....	43,450
Haynesville	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,906,050	1,753,850
Holly	...	...	...	...	..	..	...	...	.....	.....	.....	.....	193,150	303,100
Homer	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,094,100	1,280,000
La Salle	1	13	1	7	..	..	...	6	15	240	.....	.....	.....	.....
Morehouse	1	22	...	...	1	21	...	1	.....	.....	19¼	346¼	.....	.....
Ouachita	5	47	...	...	5	43	...	4	.....	.....	44	288½	.....	.....
Pleasant Hill	1	4	...	4	..	..	1	...	.....	165	.....	.....	.....	74,750
Red River	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Richland	49	108	...	2	43	101	6	5	.....	59	1,157¼	3,917¼	.....	.....
Sabine	8	32	4	13	..	1	4	18	475	3,399	1	16	.....	.....
Union	6	27	2	...	3	26	1	1	5	.....	18½	95½	.....	.....
Urania	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,479,800	1,914,000
Webster	...	10	...	6	..	2	...	2	.....	169	.....	5	.....	.....
Zwolle	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,283,300	1,870,800
Wildcats	164	347	42	124	16	29	106	194	19,155	43,883	347½	.....	.....	.....
Others	...	...	...	...	..	..	...	...	.....	.....	.....	.....	404,300	677,150
Total	255	725	57	220	75	246	123	259	20,093	52,386	1,635¾	4,871¼	11,423,100	14,998,450

*Millions of cubic feet.

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Louisiana Gulf Coast

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Anse La Butte	...	4	...	1	..	..	...	3	.....	5	.....	.....	.....	.....
Assumption Parish (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Avoca	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Avoyelles Parish (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Barataria	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Bay Junop	2	2	...	...	..	..	2	2	.....	.....	.....	.....	.....	.....
Bay St. Elaine	2	1	...	...	..	..	2	1	.....	.....	.....	.....	.....	.....
Bouregard Parish (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Bayou Blue	4	8	1	6	..	..	3	2	300	905	.....	.....	(b)	.....
Bayou Bouillon	2	5	...	2	..	..	2	3	.....	2,625	.....	.....	(c) 19,500	53,900
Bayou Choctau	5	5	2	...	..	..	3	5	3,050	.....	.....	.....	(b)	.....
Bayou Des Glaize	2	...	...	...	..	..	2	...	.....	.....	.....	.....	.....	.....
Belle Isle	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
Black Bayou	5	11	1	3	..	..	4	8	500	3,425	.....	.....	(d) 196,650	.....
Caillou Island	1	3	...	1	..	..	1	2	.....	1,100	.....	.....	.....	.....
Carenco	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Charenton	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Dog Lake	1	3	...	...	..	..	1	3	.....	.....	.....	.....	.....	.....
East Hackberry	19	25	17	17	..	..	2	8	27,963	16,518	.....	.....	1,383,300	841,500
Edgerly	2	14	1	7	..	..	1	7	400	227	.....	.....	128,650	194,300
Evangeline	2	16	2	8	..	..	...	8	125	4,095	.....	.....	251,800	600,300
Eunice	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Four Isle Bayou	1	2	...	...	..	..	1	2	.....	.....	.....	.....	.....	.....
Four League Bay	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Garden Island Bay	2	1	...	...	..	..	2	1	.....	.....	.....	.....	.....	.....
Glenwild	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Hackberry	1	18	...	7	..	..	1	11	.....	1,815	.....	.....	252,100	452,950
Hager Dome	3	5	...	...	..	..	3	5	.....	.....	.....	.....	.....	.....
Houma	2	...	...	...	..	..	2	...	.....	.....	.....	.....	.....	.....
Iowa	2	1	2	...	..	..	...	1	3,660	.....	.....	.....	(b)	.....
Jefferson Davis Parish (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Jefferson Island	5	7	...	...	..	..	5	7	.....	.....	.....	.....	.....	.....
Cameron Meadows	2	1	1	...	1	..	...	1	1,000	.....	½	.....	(b)	.....
Lake Barre	7	3	6	3	..	..	1	...	10,710	4,700	.....	.....	1,036,750	285,200
Lake Grande Ecaille	4	3	1	...	..	..	3	3	3,000	.....	.....	.....	(b)	.....
Lake Pelto	5	2	1	...	..	..	4	2	50	.....	.....	.....	(b)	.....
Leesville	4	1	4	...	..	..	...	1	4,848	.....	.....	.....	(b)	.....
Lockport	11	16	9	13	..	1	2	2	8,317	5,325	.....	1	1,962,900	1,162,800
Mallard Bay	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Napoleonville	2	6	...	...	..	..	2	6	.....	.....	.....	.....	.....	.....
New Iberia	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Patterson	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Pine Prairie	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
Port Barre	3	15	1	11	..	..	2	4	350	11,385	.....	.....	4,433,350	918,900
Rapides Parish (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Roanoke	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
Rose Dome	1	1	...	...	..	..	1	1	.....	.....	.....	.....	.....	.....
Sorrento	1	3	1	1	..	..	...	2	300	300	.....	.....	(c) 33,750	37,450
St. James Parish (WC)	2	...	...	...	..	..	2	...	.....	.....	.....	.....	.....	.....
South Calcasieu Lake	1	1	...	...	..	..	1	1	.....	.....	.....	.....	.....	.....
South Welch	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
St. Martin Parish (WC)	2	...	...	...	..	..	2	...	.....	.....	.....	.....	.....	.....
St. Tammany Parish (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Scarks Dome	4	25	4	9	..	..	...	16	632	1,520	.....	.....	(b)	.....
Sulphur	6	19	4	14	..	..	2	5	4,288	20,350	.....	.....	558,100	1,421,800
Sweet Lake	3	4	1	2	..	..	2	2	1,150	1,075	.....	.....	(c) 222,550	191,300
Thibodeaux	2	1	...	...	..	..	2	1	.....	.....	.....	.....	.....	.....
Vermillion Bay	1	2	...	...	..	..	1	2	.....	.....	.....	.....	.....	.....
Vermilion Parish (WC)	3	...	...	...	..	..	3	...	.....	.....	.....	.....	.....	.....
Vernon Parish (WC)	2	...	...	...	..	..	2	...	.....	.....	.....	.....	.....	.....
Vinton	12	27	9	24	..	..	3	3	6,490	25,907	.....	.....	2,016,750	1,824,150
Welch	2	3	1	1	..	..	1	2	10	15	.....	.....	.....	.....
Wax Lake	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
West Feliciana Parish (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
White Castle	2	1	...	1	..	..	2	...	.....	1,200	.....	.....	327,100	140,800
Wisner	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Wildcats	(e)	21	(e)	2	(e)	2	(e)	17	(e)	30	(e)	49	.....	.....
Others	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,206,750	761,200
Total	152	305	69	133	1	3	82	169	77,143	102,522	½	50	10,040,000	8,886,450

(b)—Under "Others".
(c)—First half of year, last half included under "Others".
(d)—First 7 months—Balance under "Others".
(e)—Wildcat wells for 1931 shown under respective Parishes.

*Millions of cubic feet.

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Texas—Recapitulation

Section	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Panhandle	168	540	91	324	67	167	10	49	35,361	179,936	1,736¼	1,022	21,194,350	30,734,400
East Central	208	271	88	167	5	..	115	104	467,435	699,788	33¾	.....	19,117,000	13,077,100
East	3,591	40	3,482	1	49	28	60	11	27,810,886	7	82¾	158¾	105,784,800	.....
West	236	647	147	440	3	6	86	203	49,101	287,202	281	242¾	73,677,110	109,556,050
West Central	333	1,746	85	600	62	133	186	1,013	7,849	97,763	223½	462¾	9,412,400	18,675,800
North	632	1,093	221	554	1	5	410	534	21,356	41,938	6½	14¾	20,936,150	27,527,360
Southwest	452	785	158	513	51	66	243	206	53,729	418,774	1,929¾	1,709¾	22,830,650	28,532,900
Total, outside of Gulf Coast	5,620	5,122	4,272	2,599	238	405	1,110	2,118	28,445,717	1,725,408	4,293½	6,610¾	272,952,460	230,335,460
Gulf Coast	462	1,107	235	722	10	41	217	344	161,938	387,308	273	1,117½	52,953,450	64,302,950
Grand Total	6,082	6,229	4,507	3,321	248	446	1,327	2,462	28,607,655	2,112,716	4,566½	7,728¼	325,905,910	294,638,410

Texas Panhandle

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Carson	39	77	6	36	32	35	1	6	554	7,954	874¼	.....	1,811,700	3,019,150
Childress	1	1	...	...	..	..	1	1	.....	.....	.....	.....	.....	.....
Collingsworth	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Donley	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
Gray	72	277	59	231	10	27	3	19	28,913	161,663	274¼	982½	15,014,700	22,376,100
Hall	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Hartley	...	1	...	...	..	1	...	...	.....	.....	.....	13½	.....	.....
Hutchinson	26	69	17	46	8	19	1	4	2,419	8,975	202½	510¼	3,850,900	7,488,250
Lamb	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Lipscomb	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Moore	20	13	8	4	11	7	1	2	3,450	895	278¼	213	.....	.....
Motley	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
Potter	4	7	...	1	3	6	1	...	.....	32	.....	155½	.....	.....
Randall	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Roberts	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Wheeler	5	86	1	6	3	72	1	8	25	417	107	2,147½	124,750	221,200
Others	...	...	...	...	..	..	...	...	.....	.....	.....	.....	362,300	172,200
Total	168	540	91	324	67	167	10	49	35,361	179,936	1,736¼	4,022	21,194,350	30,734,400

North Texas

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Archer	140	415	46	192	..	..	94	223	3,845	10,882	.....	.....	4,437,650	5,938,360
Baylor	4	52	...	22	..	..	4	30	.....	3,130	.....	.....	.....	.....
Burkburnett	...	...	...	...	..	..	...	...	.....	.....	.....	.....	2,345,150	2,871,750
Clay	5	22	1	6	1	2	3	14	50	205	6½	5¼	.....	.....
Collin	2	...	...	...	..	..	2	...	.....	.....	.....	.....	.....	.....
Cooke	29	84	7	30	..	..	22	54	675	1,337	.....	.....	.....	1,985,000
Denton	4	5	...	...	..	..	4	5	.....	.....	.....	.....	.....	.....
Electra	...	3	...	2	..	..	...	1	.....	86	.....	.....	3,197,550	4,019,850
Foard	2	5	...	1	..	1	2	3	.....	80	.....	3	.....	.....
Grayson	9	10	...	1	..	..	9	9	.....	30	.....	.....	.....	.....
Hardeman	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Haskell	3	3	...	...	..	1	3	2	.....	.....	.....	4	.....	.....
K.M.A.-Iowa Park	...	6	...	4	..	..	...	2	.....	250	.....	.....	1,319,200	1,843,100
Montague	3	50	1	28	..	1	2	21	40	1,729	.....	2½	1,921,500	1,683,650
North Young	352	69	131	31	..	..	221	38	15,737	4,290	.....	.....	3,030,500	417,050
Wichita	65	203	31	123	..	..	34	80	956	5,743	.....	.....	.....	.....
Wilbarger	13	165	4	114	..	..	9	51	53	14,176	.....	.....	4,220,250	7,942,150
Wise	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Others	...	...	...	...	..	..	...	...	.....	.....	.....	.....	464,350	669,850
Total	632	1,093	221	554	1	5	410	534	21,356	41,938	6½	14¾	20,936,150	27,527,360

East Texas

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Angelina	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Gregg	32	...	21	...	..	..	11	...	256,500	.....	.....	.....	.....	.....
Harrison	...	1	...	...	..	1	...	...	.....	.....	.....	5½	.....	.....
Joiner-Bradford	1,060	...	1,047	...	..	..	13	...	7,022,735	.....	.....	.....	36,938,050	14,500
Kilgore	1,136	...	1,126	...	..	..	10	...	9,492,440	.....	.....	.....	42,990,400	.....
Longview	1,144	...	1,126	...	..	..	18	...	10,074,175	.....	.....	.....	25,856,350	.....
Panola	2	25	...	1	2	24	...	...	.....	7	10¾	6¾	.....	.....
Rusk	162	1	156	...	..	..	6	1	965,036	.....	.....	.....	.....	.....
Upshur	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Wildcats	53	13	6	...	47	3	...	10	.....	.....	72	90	.....	.....
Total	3,591	40	3,482	1	49	28	60	11	27,810,886	7	82¾	158¾	105,784,800	14,500

*Millions of cubic feet.

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East Central Texas

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Anderson	1	...	1	...	..	..	...	...	35	.....	.....	.....	.....	.....
Boggy Creek	1	1	1	1	..	..	...	...	100	30	...	.....	648,600	1,151,850
Bowie	2	...	...	...	..	..	2	...	.....	.....	.....	.....	.....	.....
Cass	3	...	...	...	..	..	3	...	.....	.....	.....	.....	.....	.....
Cherokee	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Corsicana-Powell	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,400,950	2,126,850
Currie	...	...	...	...	..	..	...	...	.....	.....	.....	.....	97,400	121,100
Henderson	1	1	...	...	..	..	1	1	.....	.....	.....	.....	.....	.....
Fannin	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Limestone	1	3	...	1	..	..	1	2	.....	10	.....	.....	.....	.....
Mexia	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,206,100	1,571,000
Morris	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Nigger Creek	...	...	...	...	..	..	...	...	.....	.....	.....	.....	31,400	73,250
Richland	...	...	...	...	..	..	...	...	.....	.....	.....	.....	28,900	78,700
Smith	3	...	2	...	..	..	1	...	25,000	.....	.....	.....	.....	.....
Van Zandt	96	172	83	164	5	..	8	8	434,600	694,856	27¾	.....	15,546,550	7,638,850
Wortham	...	...	...	...	..	..	...	...	.....	.....	.....	.....	148,600	293,000
Wildcats	99	92	1	1	..	..	98	91	7,700	3,000	6	.....	.....	.....
Others	...	...	...	...	..	..	...	...	.....	.....	.....	.....	8,500	7,900
Total	208	271	88	167	5	..	115	104	467,435	699,788	33¾	.....	19,117,000	13,062,600

West Texas

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Andrews	1	...	1	...	..	..	...	...	.....	50	.....	.....	.....	.....
Crane	7	37	6	36	..	..	1	1	1,862	18,942	.....	.....	8,161,850	14,582,800
Crockett	1	6	1	6	..	..	...	...	80	970	.....	.....	562,600	771,450
Ector	1	75	1	72	..	1	...	2	230	44,896	.....	5	2,439,950	3,088,150
Fisher	11	10	7	7	..	..	4	3	4,670	3,053	.....	.....	.....	.....
Howard-Glasscock	10	84	8	79	..	..	2	5	1,265	34,282	.....	.....	5,386,110	11,240,900
Irion	7	6	3	4	..	..	4	2	765	240	.....	.....	.....	.....
Jones	19	3	11	3	..	..	8	...	1,835	465	.....	.....	478,550	586,750
Loving	18	16	16	16	..	..	2	...	5,720	5,945	.....	.....	.....	.....
Mitchell-Scurry	2	8	2	5	..	..	...	3	165	370	.....	.....	670,600	808,000
Pecos	27	145	23	134	1	2	3	8	3,975	156,407	2	92½	1,165,150	1,995,100
Reagan	4	12	3	12	..	..	1	...	18,340	9,003	259	116¾	9,744,450	7,275,550
Taylor	2	...	1	...	1	..	...	...	35	.....	1½	.....	.....	.....
Tom Green	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Upton	23	17	18	16	..	..	3	1	4,820	4,050	.....	.....	.....	.....
Ward	46	32	39	28	1	..	6	4	4,115	5,769	18½	25½	.....	.....
Winkler	3	9	2	7	..	..	1	2	64	1,555	.....	.....	15,449,250	26,454,400
Yates	...	...	...	...	..	..	...	...	.....	.....	.....	.....	27,095,850	40,921,050
Wildcats	54	187	5	15	..	3	49	169	1,160	1,255	.....	3	.....	.....
Others	...	...	...	...	..	..	...	...	.....	.....	.....	.....	2,522,750	1,631,850
Total	236	647	147	440	3	6	86	201	49,101	287,202	281	242¾	73,677,110	109,556,050

West Central Texas

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Brown	37	171	6	52	6	12	26	107	212	2,955	17¾	21	1,271,000	2,449,450
Burnett	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Callahan	21	106	5	13	2	10	14	83	180	387	4¼	21	656,150	1,229,900
Coleman	76	167	30	51	7	18	39	98	4,890	4,869	.....	53¾	697,800	1,402,250
Comanche	2	22	...	4	..	8	2	10	.....	50	.....	14¼	.....	.....
Eastland-Desdemona	30	103	7	31	12	28	11	44	265	2,104	36¼	117	1,341,750	1,981,850
Erath	4	25	...	...	..	11	4	14	.....	.....	.....	14	.....	.....
Hamilton	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Hood	4	2	...	...	..	..	4	2	.....	.....	.....	.....	.....	.....
Jack	11	48	3	30	3	3	5	15	965	3,075	9¼	32	598,200	1,141,450
Johnson	1	1	...	...	..	..	1	1	.....	.....	.....	.....	.....	.....
Kimble	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Lampasas	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Mills	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
McCulloch	...	3	...	...	..	..	...	3	.....	.....	.....	.....	.....	.....
Palo Pinto	47	48	6	14	22	15	18	19	159	346	133¼	35	131,250	203,150
Parker	2	3	1	...	1	..	...	3	5	.....	.....	.....	.....	.....
San Saba	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Shackleford	30	135	11	45	2	3	17	87	230	2,408	¼	6	1,229,900	2,484,450
Stephens	13	66	3	26	4	20	6	20	58	4,042	20¼	100½	1,613,500	2,055,750
Throckmorton	18	38	...	5	3	1	15	33	.....	33	2¼	2½	169,200	295,300
Young	35	804	13	330	..	4	22	470	885	77,494	.....	45¾	1,285,850	4,884,650
Others	...	...	...	...	..	..	...	...	.....	.....	.....	.....	417,800	547,100
Total	333	1,746	85	600	62	133	186	1,013	7,849	97,763	223½	462¾	9,412,400	18,675,800

*Millions of cubic feet.

Southwest Texas

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Atascosa	2	2	...	...	..	..	2	2	.....	.....	.....	.....	.....	.....
Bastrop	8	11	3	1	..	..	5	10	266	10	.....	.....	.....	.....
Bee	25	5	10	2	2	1	13	2	5,376	511	76	1½	.....	.....
Bexar	22	30	9	21	1	2	12	7	95	1,625	1	2¾	.....	.....
Blanco	3	...	...	...	..	..	3	...	.....	.....	.....	.....	.....	.....
Brooks	3	6	...	1	..	2	3	3	.....	200	.....	68	.....	.....
Bloomington	1	...	...	...	1	..	...	...	.....	.....	30	.....	.....	.....
Caldwell	10	21	3	9	..	..	7	12	54	4,437	2	.....	.....	.....
Chapman	4	35	4	29	..	..	...	6	2,185	15,860	.....	.....	1,250,500	1,214,000
Comal	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Cuellar	2	...	2	...	..	..	...	...	150	.....	.....	.....	.....	.....
Dale	...	1	...	1	..	..	...	...	.....	50	.....	.....	93,100	105,750
Darst Creek	15	253	13	234	..	..	2	19	7,893	348,135	.....	.....	8,088,200	10,747,450
De Witt	2	4	...	...	..	..	2	4	.....	.....	.....	.....	.....	.....
Duval	45	41	25	18	6	12	14	11	13,735	3,855	150	295	.....	.....
Edwards	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Fayette	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
Frio	2	2	...	...	..	..	2	2	.....	.....	.....	.....	.....	.....
Goliad	8	5	3	1	..	2	5	2	220	125	50	43	.....	.....
Gonzales	3	10	...	...	..	..	3	10	.....	.....	.....	.....	.....	.....
Guadalupe	15	14	9	1	..	..	6	13	16,568	2,000	.....	.....	.....	.....
Hays	2	2	...	...	..	..	2	2	.....	.....	.....	.....	.....	.....
Jim Hogg	9	8	1	...	1	1	7	7	5	.....	12	5½	.....	.....
Jim Wells	10	2	1	...	3	2	6	...	10	.....	107	70	.....	.....
Karnes	5	8	...	...	..	..	5	8	.....	.....	.....	.....	.....	.....
Kendall	5	3	...	...	..	..	5	3	.....	.....	.....	.....	.....	.....
Kerr	6	2	...	1	..	..	6	1	.....	250	.....	.....	.....	.....
Kimball	2	2	...	...	..	..	2	2	.....	.....	.....	.....	.....	.....
Kinney	1	1	...	...	..	..	1	1	.....	.....	.....	.....	.....	.....
Kleberg	1	2	...	...	..	1	1	1	.....	.....	.....	12	.....	.....
Lavaca	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Laredo District	...	...	...	...	..	..	...	...	.....	.....	.....	.....	5,134,300	4,027,200
La Salle	1	2	...	...	..	..	1	2	.....	.....	.....	.....	.....	.....
Live Oak	13	6	2	...	..	1	11	5	163	.....	.....	3	.....	.....
Luling	...	...	...	...	..	..	...	...	.....	.....	.....	.....	3,019,800	3,589,600
Lytton Springs	...	...	...	...	..	..	...	...	.....	.....	.....	.....	248,550	308,850
Maverick	1	8	...	2	1	2	...	4	.....	92	5	36	.....	.....
McMullen	4	3	...	...	1	..	3	3	.....	.....	4	.....	.....	.....
Medina	8	10	1	1	..	1	7	8	5	5	.....	40	.....	.....
Milam	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
Nueces	20	12	7	4	7	6	6	2	725	769	270	230	.....	.....
Real	2	...	...	...	..	..	2	...	.....	.....	.....	.....	.....	.....
Roma	...	5	...	...	..	2	...	3	.....	.....	.....	19	.....	.....
Salt Flat	...	10	...	10	..	..	...	...	.....	2,085	.....	...	4,389,050	7,582,950
San Patricio	14	1	1	...	3	1	10	...	40	.....	100	60	.....	.....
Somerset	...	...	...	...	..	..	...	...	.....	.....	.....	.....	436,050	503,550
Starr	18	...	6	...	2	..	10	...	147	.....	10¾	.....	.....	.....
Travis	3	1	...	...	..	..	3	1	.....	.....	.....	.....	.....	.....
Val Verde	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
Victoria	7	...	1	...	3	..	3	...	40	.....	140	.....	.....	.....
Webb	27	44	6	19	7	13	14	12	405	1,652	83	342	.....	.....
White Point	...	1	...	...	..	1	...	...	.....	.....	.....	34½	.....	.....
Willacy	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Williamson	6	15	...	14	..	..	6	1	.....	17,075	.....	.....	.....	.....
Wilson	2	4	...	...	..	..	2	4	.....	.....	.....	.....	.....	.....
Zapata	101	174	48	144	11	13	42	17	5,482	20,038	230	418	.....	.....
Zavalla	5	10	...	...	2	3	3	7	.....	.....	22½	30	.....	.....
Wildcats	8	...	3	...	..	..	5	...	165	.....	50	.....	.....	.....
Others	...	...	...	...	..	..	...	...	.....	.....	.....	.....	171,100	500,050
Total	452	785	158	513	51	66	243	206	53,729	418,774	1,929¾	1,709¾	22,830,650	28,532,900

Texas Gulf Coast

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Allen Dome	8	6	2	2	..	..	6	4	1,700	2,300	.....	.....	(b)	.....
Alleyton (Colorado Co.)	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Austin Co. (WC)	2	1	...	...	..	..	2	1	.....	.....	.....	.....	.....	.....
Barbers Hill	62	124	57	112	..	..	5	12	67,828	84,579	.....	.....	8,217,350	7,888,900
Batson	1	31	1	21	..	..	...	10	2	535	.....	.....	1,972,100	427,900
Bell Co. (WC)	4	...	...	...	..	..	4	...	.....	.....	.....	.....	.....	.....
Big Creek	1	14	...	7	..	..	1	7	.....	4,762	.....	.....	849,250	1,413,500
Big Hill	1	3	...	...	..	..	1	3	.....	.....	.....	.....	.....	.....
Blue Ridge	3	19	3	12	..	..	...	7	775	2,924	.....	.....	396,750	654,950
Bloomington (Victoria Co.)	...	4	...	...	..	2	...	2	.....	.....	.....	70	.....	.....
Boling	2	1	...	...	..	..	2	1	.....	.....	.....	.....	279,550	379,950
Brenham	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Brazoria Co.(WC)	3	...	...	...	..	..	3	...	.....	.....	.....	.....	.....	.....
Brazos Co. (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Bryan Mound	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Burleson Co. (WC)	7	...	...	...	..	..	7	...	.....	.....	.....	.....	.....	.....
Calhoun Co. (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Cedar Bayou	1	2	...	...	..	..	1	2	.....	.....	.....	.....	.....	.....
Chambers County (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Chocolate Creek (Calhoun Co.)	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Citrus Grove (Matagorda Co.)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Clay Creek (Somerville)	16	17	10	11	..	1	6	5	1,980	2,425	.....	2	494,550	618,450

*Millions of cubic feet.

(Continued on next page)

Texas Gulf Coast—*Continued*

County or Field	Completions		Producers		Gas Wells		Failures		Initial Production Oil		Initial Production Gas*		Total Production	
	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930
Clear Lake (Thompson)	10	...	10	...	..	..	...	...	20,144	.....	.....	.....	(f) 642,150	.....
Clodine	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
Colorado Co.(WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Cove	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
Damon Mound	5	5	3	1	..	..	2	4	1,930	500	.....	.....	313,550	228,400
Danbury	...	5	...	1	..	..	...	4	.....	35	.....	.....	.....	.....
Deer Park	1	1	...	...	..	..	1	1	.....	.....	.....	.....	.....	.....
Devers	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Dyersdale	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Edna	6	...	...	...	5	..	1	...	.....	.....	98	.....	.....	.....
Esperson	9	33	6	25	..	2	3	6	1,410	10,089	.....	18	733,850	797,050
Eureka	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Fannett	1	6	...	2	..	..	1	4	.....	1,600	.....	.....	187,450	360,100
Fayette Co. (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Fresno	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Genoa	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Goose Creek	1	10	1	4	..	..	...	6	140	675	.....	.....	1,500,750	1,690,450
Grimes Co. (WC)	2	1	...	...	..	..	2	1	.....	.....	.....	.....	.....	.....
Hankamer	4	9	3	7	..	..	1	2	3,970	6,130	.....	.....	803,100	439,650
Heiskell	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Hardin Co. (WC)	5	...	...	...	..	..	5	...	.....	.....	.....	.....	.....	.....
Harris Co. (WC)	6	...	...	...	..	..	6	...	.....	.....	.....	.....	.....	.....
High Island	6	6	5	5	..	..	1	1	3,460	6,852	.....	.....	(b)	.....
Hockley	1	2	...	...	..	..	1	2	.....	.....	.....	.....	.....	.....
Houston Co. (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Hull	7	50	4	44	..	..	3	6	1,675	16,475	.....	.....	2,176,050	3,183,500
Humble	17	84	6	66	..	1	11	17	3,375	58,874	.....	10	3,084,950	6,355,550
Jefferson Co. (WC)	3	...	...	...	..	..	3	...	.....	.....	.....	.....	.....	.....
Lolita	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Lavaca Co. (WC)	3	...	...	...	..	..	3	...	.....	.....	.....	.....	.....	.....
Lee Co. (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Lockridge	...	...	...	...	..	..	...	...	.....	.....	.....	.....	.....	.....
Liberty Co. (WC)	2	...	...	...	..	..	2	...	.....	.....	.....	.....	.....	.....
Long Point	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Lost Lake	3	10	1	4	..	..	2	6	480	835	.....	.....	.....	99,000
Madison Co. (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Manvel	2	...	1	...	..	..	1	...	2,000	.....	.....	.....	45,550	.....
Markham	3	2	3	2	..	..	...	...	1,180	205	.....	.....	(b)	139,550
Matagorda County (WC)	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
McLennan County (WC)	4	...	...	...	..	..	4	...	.....	.....	.....	.....	.....	.....
Montgomery County (WC)	7	...	...	...	..	..	7	...	.....	.....	.....	.....	.....	.....
Milam Co. (WC)	9	...	...	...	..	..	9	...	.....	.....	.....	.....	.....	.....
Moores Field (Orchard)	4	7	4	7	..	..	...	...	2,320	6,215	.....	.....	498,600	472,700
Moss Bluff	27	6	1	4	..	..	26	2	540	3,050	.....	.....	111,900	.....
Mykawa	4	6	1	2	..	..	3	4	41	660	.....	.....	(b)	.....
Nacogdoches County (WC)	4	...	...	...	..	..	4	...	.....	.....	.....	.....	.....	.....
Nash	4	2	2	...	..	..	2	2	2,100	.....	.....	.....	(b)	.....
Newton Co. (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
North Dayton	4	14	1	8	..	..	3	6	300	9,160	.....	.....	224,700	454,150
Nursery	...	1	...	...	..	1	...	...	.....	.....	.....	1	.....	.....
Ogburne (Harris Co.)	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Orange	6	11	2	11	..	..	4	...	105	3,200	.....	.....	638,300	820,350
Oyster Bayou	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Pettus (g)	6	94	4	47	..	10	2	37	910	18,521	20	220	2,414,350	1,555,100
Pierce Junction	23	56	21	36	..	..	2	20	12,520	31,765	.....	.....	2,971,550	3,969,000
Pilant Lake (Fort Bend Co.)	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
Polk Co. (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Port Neches	...	3	...	2	..	..	...	1	.....	2,725	.....	.....	489,650	660,302
Raccoon Bend	17	30	5	21	2	1	10	8	1,412	6,133	40	4	2,694,600	3,795,350
Refugio	78	189	64	142	3	16	11	31	24,686	6,4107	115	725	9,489,050	11,778,730
Robertson County (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Salt Cedars	...	1	...	...	..	..	...	1	.....	.....	.....	.....	.....	.....
San Felipe	1	4	...	...	..	..	1	4	.....	.....	.....	.....	.....	.....
San Jacinto County (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Saratoga	7	26	6	20	..	3	1	3	215	598	.....	5	361,550	391,000
Shepherds Mott	2	1	...	...	..	..	2	1	.....	.....	.....	.....	.....	.....
Sour Lake	...	16	...	10	..	..	...	6	.....	359	.....	.....	684,750	826,000
South Dayton	...	...	...	...	..	..	...	...	.....	.....	.....	.....	.....	.....
South Liberty	...	23	...	17	..	..	...	6	.....	4,444	.....	.....	716,050	1,577,100
Spindle Top	9	76	8	51	..	3	1	22	4,740	28,736	.....	61	3,089,450	5,955,250
Stratton Ridge	3	3	...	...	..	..	3	3	.....	.....	.....	.....	.....	.....
Sugarland	...	16	...	15	..	1	...	...	.....	7,576	.....	1½	4,201,650	4,297,550
Tyler Co. (WC)	2	...	...	...	..	..	2	...	.....	.....	.....	.....	.....	.....
Walker Co. (WC)	1	...	...	...	..	..	1	...	.....	.....	.....	.....	.....	.....
Washington County (WC)	7	...	...	...	..	..	7	...	.....	.....	.....	.....	.....	.....
West Columbia	1	6	...	3	..	..	1	3	.....	265	.....	.....	1,491,800	1,882,200
Wharton Co. (WC)	8	...	...	...	..	..	8	...	.....	.....	.....	.....	.....	.....
Yarboro (Grimes Co.)	...	2	...	...	..	..	...	2	.....	.....	.....	.....	.....	.....
Wildcats	(e)	51	(e)	...	(e)	..	(e)	51	(e)	.....	(e)	.....	.....	.....
Others	...	...	...	...	..	..	...	...	.....	.....	.....	.....	1,179,450	1,420,800
Total	462	1,107	235	722	10	41	217	344	161,938	387,308	273	1,117½	52,953,450	64,302,950
Total Louisiana and Texas Gulf Coast	614	1,412	304	855	11	44	299	513	239,081	489,830	273½	1,167½	62,993,450	73,189,400

(b)—Under "Others". (f)—First 2 Months Production included under "Others". (g)—Pettus completions partly included with Bee and Goliad Counties, Southwest Texas during 1931. (e)—Wildcat wells shown under respective Counties. *Millions of cubic feet.

The Law Makers *are* Breaking Faith

Gasoline is used by practically everybody, and a tax upon the sale of this commodity is levied by every state in the Union. The imposition of the gasoline tax was accepted without opposition by motorists solely because the proceeds *were* used for the construction and maintenance of highways.

The tax had a modest beginning in 1918 when the State of Oregon levied a 1 cent per gallon tax. Today, the average of all state taxes is 4.07 cents per gallon. In some instances counties, cities and other local communities have also super-imposed another tax upon the one levied by the state.

The tax has been pyramided until it has now reached the point of diminishing returns, and the consumption of gasoline is in some states materially less than it would be with a lower tax. This not only prevents the state from obtaining the revenue for roads, but also places a burden upon the oil industry which has proven so destructive as to warrant a nation-wide uprising against further increases in the tax.

Many states are diverting the proceeds from the gasoline tax to pay the costs of various functions of government alien to highways. Some of these purposes have been the propagation of oysters, state charity, free seeds, and even the state treasury deficit.

Every legislature which is meeting at the present time or which will meet in the future is planning further tax raids upon the motorist by providing diversion of part of the proceeds of the tax from its original purpose, or by levying additional gasoline taxes for purposes other than highway construction or maintenance.

Thus, the law makers are breaking faith with the motorist and the public generally. The time to rectify such practices has arrived.

The Governmental Cost Structure must be deflated to bring it into line with the degree of economy which has been found necessary in business and living costs.

This Association urges every motorist and oil operator to become vocal in opposition to federal gasoline taxes and to increases or diversions of state gasoline taxes.

Mid-Continent Oil & Gas Association

TULSA, OKLAHOMA

(This space contributed by a member)

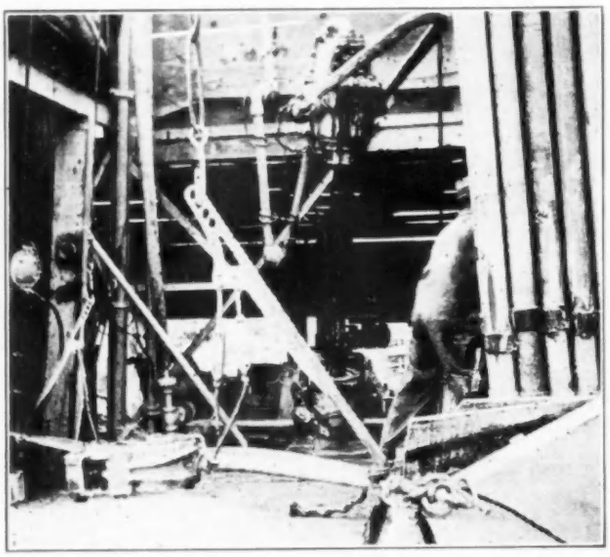
Preston Culp 6, 10,079 Feet

Oklahoma Well Sets Depth Record *for* United States

By FLOYD SWINDELL
Staff Representative

DURING the past 10-year period more than 5000 feet have been added to the depth to which man can explore the interior of the earth's crust through the medium of the drill. It is not a difficult memory feat even for newcomers to the oil industry to remember when a 5000-foot test was a real accomplishment. Now we are drilling twice that depth and think but little more of it. That 10,000-foot drilling is practicable and can be accomplished with present day equipment was demonstrated three times during 1931, making that year a period of outstanding achievement in the annals of exploration for petroleum. Furthermore, the fact that no tests encountered insurmountable mechanical difficulties and were finished in good condition, would seem to indicate that 10,000-foot drilling as a general rule awaits only an economic condition which will permit profitable operation from such great depths.

In going to a total depth of 10,079 feet, Mid-Kansas Oil & Gas Company and Ramsey Petroleum Corporation's Preston Culp 6, NW NW NE Section 6-5n-9w, in the old Cement pool, southeastern Caddo County, Oklahoma, established a new depth record for the United States and stopped only 506 feet short of the world record now held by Pen-Mex Fuel Company's Jardin 35, in Vera Cruz, Mexico. However, a commercial record is an empty accomplishment unless it adds to the fund of information by which an industry may progress and it is with the express purpose of pointing out the knowledge gained through the drilling of this remarkable well that the following account is presented.



Coming out of the hole, depth about 9700 feet

From a study of the drilling record of the Preston Culp 6, it appears that two outstanding contributions were made. First, it demonstrated that mechanical engineering and metallurgy, assisted by the counsel of practical oil men, have produced a type of equipment which will withstand the severe conditions encountered in drilling to depths of 10,000 feet or more, although some of the items are not now designed to reach such depths with an adequate theoretical factor of safety; in the second place it was shown that the rotary drilling profession has developed a fine technique which assures all equipment a fair chance of success through careful usage. Close co-operation between the technical and practical branches of the industry most certainly is responsible for the rapid advances that have been made in recent years and it would be folly to attempt to predict what may be accomplished during the next 10 years when it may be a common occurrence to tabulate well depths in figures of five digits.

The Preston Culp 6 is located in the western portion of the Cement pool on a 7500-acre block owned equally by Mid-Kansas Oil & Gas Company and Ramsey Petroleum Corporation. (See pages 14, 15 and 16, August 7, 1931, issue THE OIL WEEKLY for location of the test with respect to the Anadarko Basin and Wichita Mountains.) The Cement pool was developed in the Fortuna and Prosperity sands of Permian age during the years 1917 to 1924, production ranging in depth from 2000 to 2500 feet. Ramsey Petroleum Corporation drilled the first deeper test in 1930, discovering what is known as the Noble-Olson sand at 3371 to 3391 feet in its Wade 8, NW SW SE Section 2-5n-9w, in the eastern portion or Cement dome. Subsequent drilling revealed the existence of commercial production in several lower sands the lowest of which was at 4867 to 4971 feet where Mid-Kansas and Ramsey have a 17,500,000 cubic foot gas well.

Development of deeper production in the eastern dome led to the natural assumption that the same sands would be found productive under Keeche Dome and several wells were deepened successively. The companies' officials were not anxious, under the present condition of the industry to carry on a drilling campaign, especially due to the fact that the Cement pool is served by only one purchaser and there was no demand for additional supply. Mid-Kansas and Ramsey's Lucy Jones 4, Account 2, SW SW SE Section 31-6n-9w, had been deepened to about 4000 feet and Preston Culp 6 was located as a south offset to satisfy lease requirements. The test originally was scheduled to go to

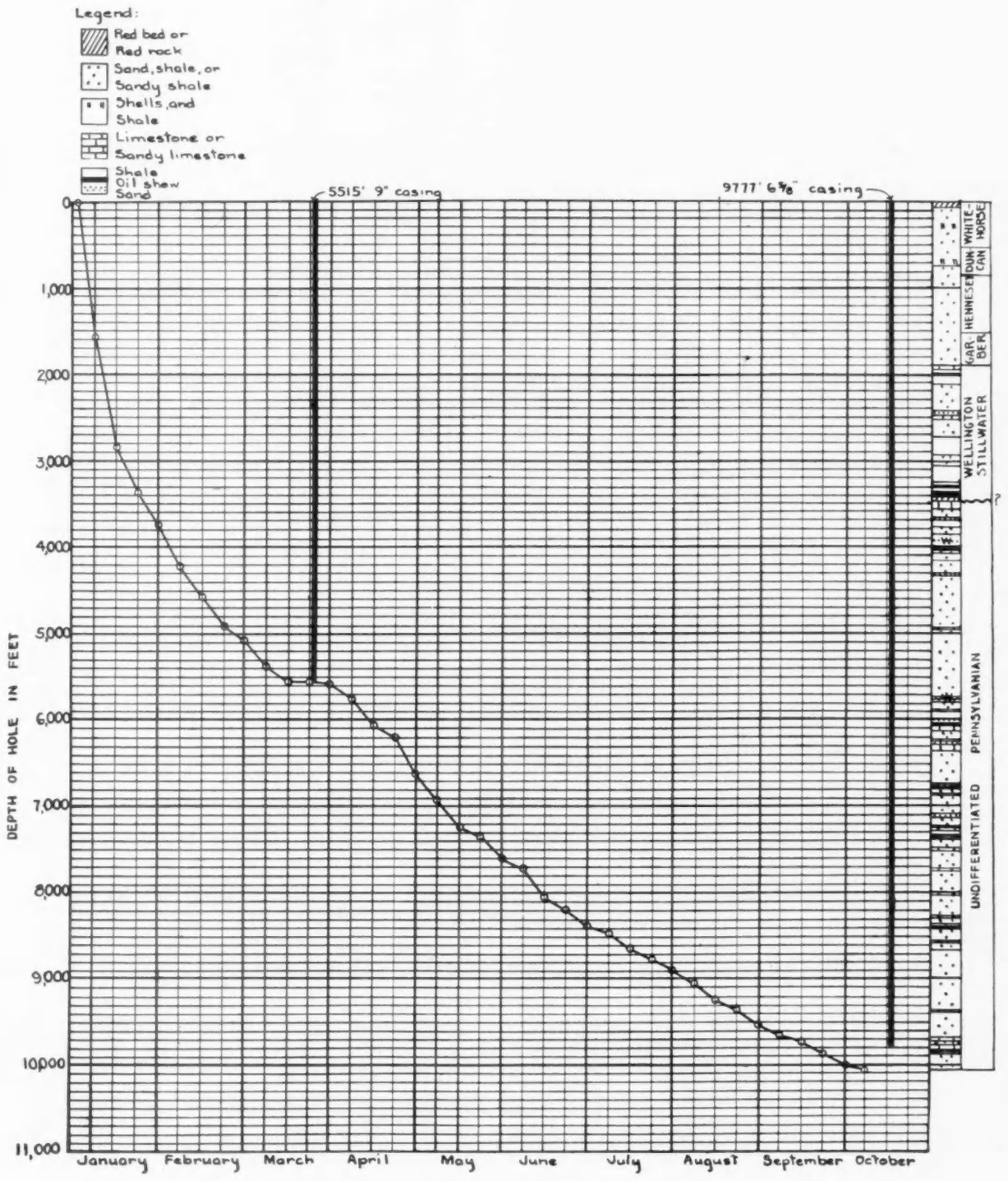
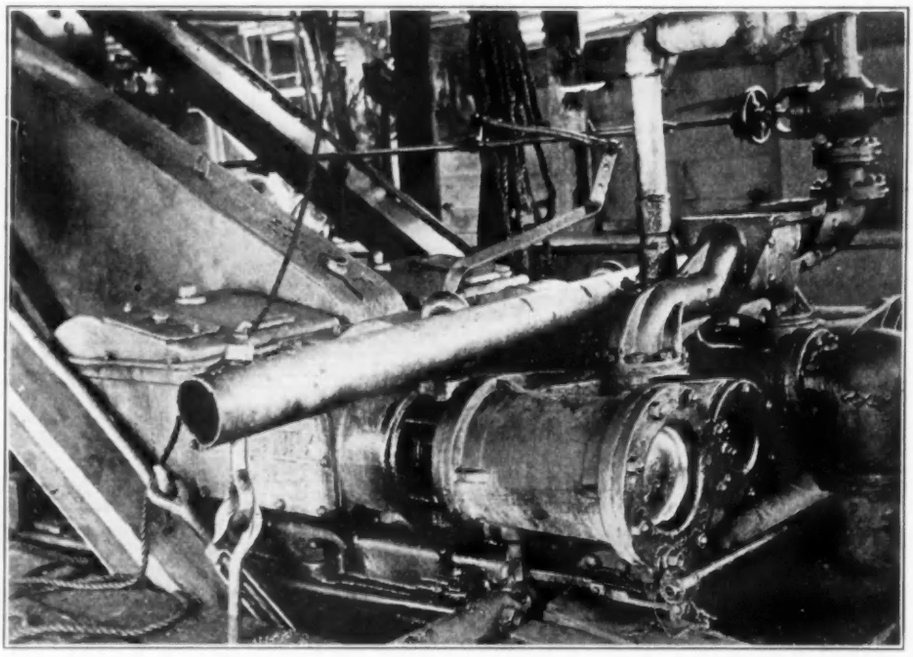


FIGURE 1

Drilling progress curve showing composite driller's log and correlations based on cutting study. Small circles on curve show depth of hole at the end of each week. Heavy black lines indicate principal casing strings, their depth and date of running



The engine that did the job. This 12 x 12 Ideal-Ajax twin had been used in the Oklahoma City pool before being moved to Cement to drill the Preston Culp 6

a maximum depth of about 4000 feet with the object of testing several sands which were known to be present above that depth. When these sands failed to yield more than small showings of oil and gas it was decided to go deeper and possibly to test Wilcox sand.

The well was spudded January 4, 1931, using what might be called Oklahoma City or later Seminole type, rotary equipment which was more than adequate for the intended depth. When the decision was made to test for Wilcox some changes were made but most of the original equipment remained unchanged. The derrick, which had been moved from the Seminole district and which had already been used to drill two wells in the Cement pool, was relegged with four-inch, seamless relegs and retopped with 18-inch, 90-pound header beams and a new gin pole. A new string of drill pipe had been installed at 3585 feet and at 4990 feet it was deemed advisable to change boilers. Equipment changes below that depth are shown in Table 1.

TABLE 1

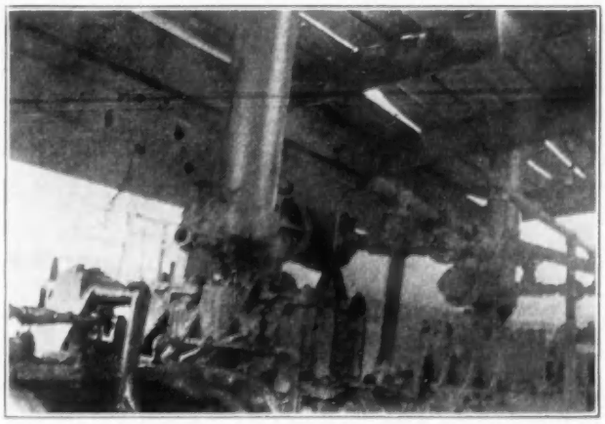
Items	Depth feet	Remarks
Flues in one boiler	6275	
Changed rotary drum*	7110	Rims slightly worn
Strung 8 lines	7115	
Changed ends drilling line	7275	
Put up big travelling block	7275	
Changed water table	7340	
Changed rotary	7605	
Changed four-inch drill pipe	7848	
Cut off drilling line	8274	
Reline brakes	8274	
Changed drilling line	8390	
Reflue boilers	8622	
Install blow-out preventer	8880	
Changed drilling line	8983	
New sheave crown block	9255	
Strung 10 lines	9355	
Changed drum*	9650	Rims slightly worn
Cut off drilling line	9691	
Change drilling line	9827	

*Steel rims were used as a matter of extra precaution and safety.

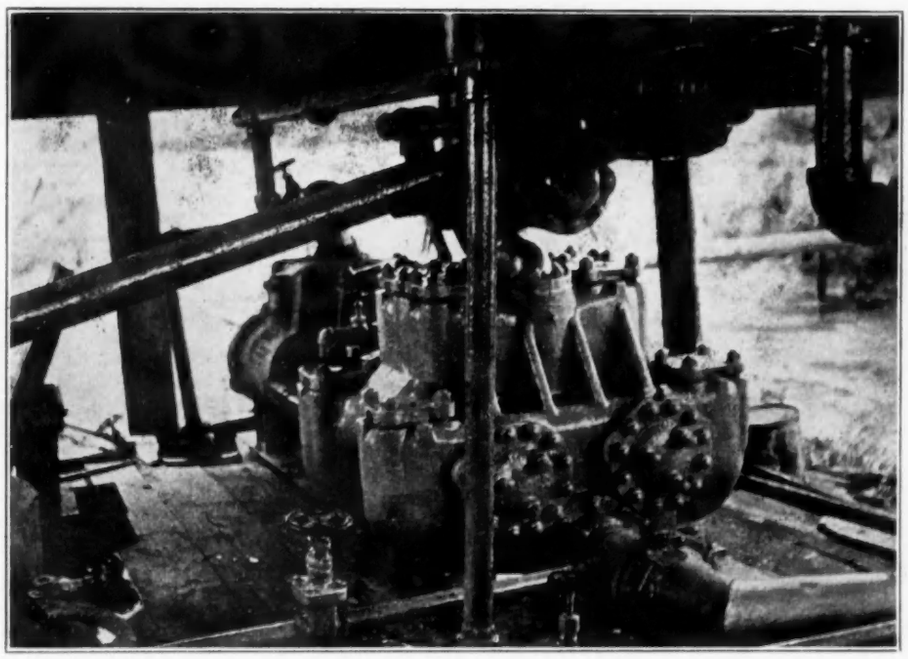
Changes shown in Table 1 should not be construed as meaning that the equipment had reached the end of its useful life. Many items were replaced as a matter of extreme precaution, especially below 7200 feet.

Figure 1 shows the drilling progress plotted with depth against time. Heavy lines are used to show the casing points on the two principal strings and the date of running. The graphic strip on the right is a composite of the drillers log and correlations on the extreme right are based on a study of drill cuttings. A study of the curve reveals a uniform increase in depth of the hole interrupted only by minor losses in time.

Table 2, based on the drillers' log, shows the allocation of time from January 4, 1931, to October 6, 1931, a total of 6648 hours elapsed time. All figures are estimated and approximate. Each charge of time is made according to the driller's ticket; but it should be understood that not all of the time shown was actually consumed in making the repair. For example: 12 hours are charged to changing rotary table; actual time required for the change probably was not over two or three hours, the remaining time being due to re-racking pipe and other preparatory moves, although



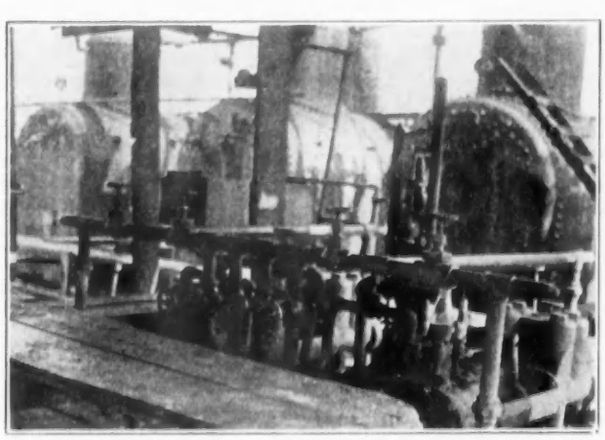
A portion of the two 14½ x 7½ x 18 slush pumps which worked under pressures as high as 1200 pounds while pumping from the total depth



Gardner - Denver auxiliary pump is used in cases of emergency to develop higher pressures

it is believed that the entire 12 hours should be charged to changing rotary table since it was this item which was responsible for the loss of 12 hours. Fifty-eight hours are charged to repairing derrick; of this amount approximately 48 hours were consumed in relegging and retopping and the remainder to tightening. Most of the equipment had been used on one or more wells before being installed on the Preston Culp 6, but records are not available to show the amount of time or footage even for the major items. The drilling engine and slush pumps had been used in Oklahoma City for drilling to depths below 6000 feet and it may be safely said that they were more than just "broken in" when placed on the Cement test. In considering the record of shut-down time on boiler repair it should be remembered that the boilers were "under fire" at working pressures up to 300 pounds per square inch for a minimum of 6000 hours of the total elapsed time while it is roughly estimated that the engine, which would be the next item of most constant use, probably was not in actual operation over 4500 hours. Water supply, although good from the driller's viewpoint, probably was far from a chemically perfect boiler feed water.

A major portion of the difficulty was encountered in running casing. On March 17, with total depth at 5588 feet, the nine-inch, 40 pound, Youngstown casing stuck 134 joints down. After failing to loosen the string with circulating mud fluid, 117 barrels of oil were pumped into the hole and the hole soaked for 48 hours. An oil line was then laid



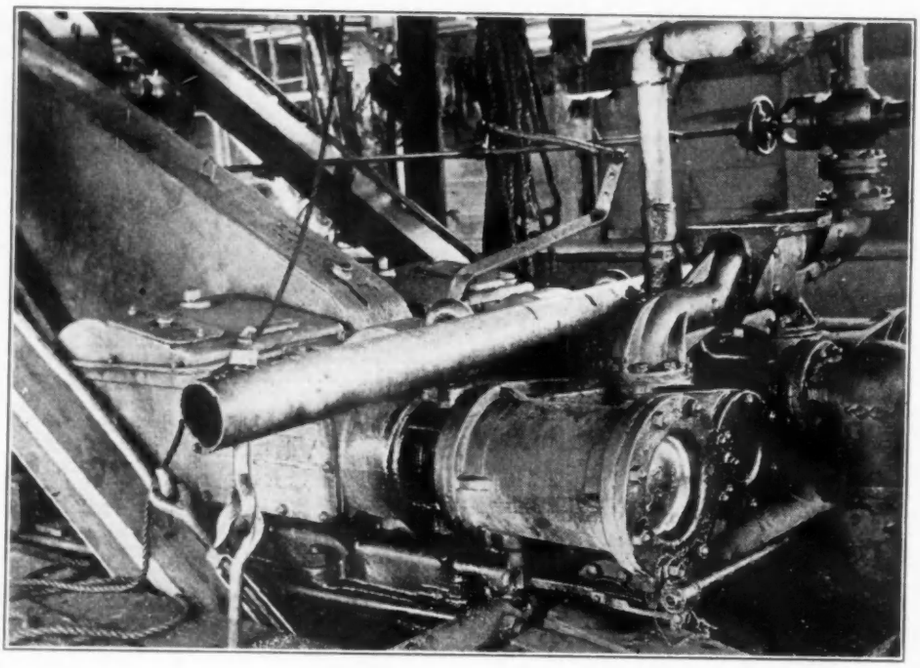
Worthington boiler feed pumps. Three Kewanee boilers in the background

Elapsed Time

TABLE 2

Total elapsed time, January 4, 1931, to October 8, 1931, when total depth was reached = 6648 hours.

Operations and Repairs	Estimated No. Hours
Running acid bottle every 250 feet down to 5250 feet	126
Waiting on cement to set on surface and nine-inch strings	228
Waiting on orders	5
Repairing derrick	58
Pumping for samples	5
Laying down and picking up drill pipe	80
Fishing	20
Cleaning out slush and settling pits	12
Changing boilers	72
Repairing boilers	170
Boiler smoke stack down	12
Repair engine	7
Change tool joints	24
Running casing not including 6⅝-inch string	168
Mixing mud	48
Changing drums	48
Cutting off, reversing or changing drilling lines	60
Straightening four-inch drill pipe	12
Changing rotary table	12
Repair draw works	12
Reconditioning mud fluid	24
Inclement weather	8
Miscellaneous repairs and installations	97
Drilling, making round trips, and minor delays	4661
Coring	567
Reaming	112
Total	6648



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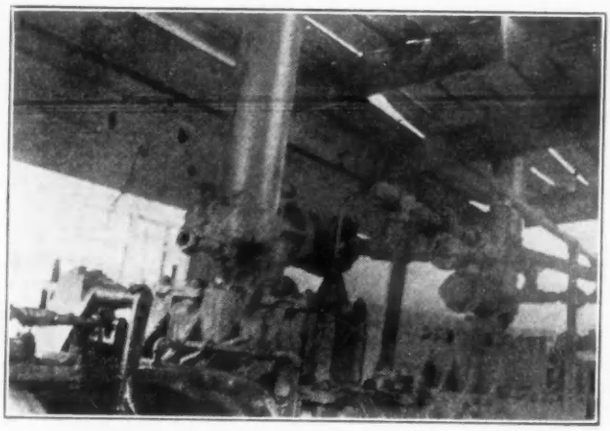

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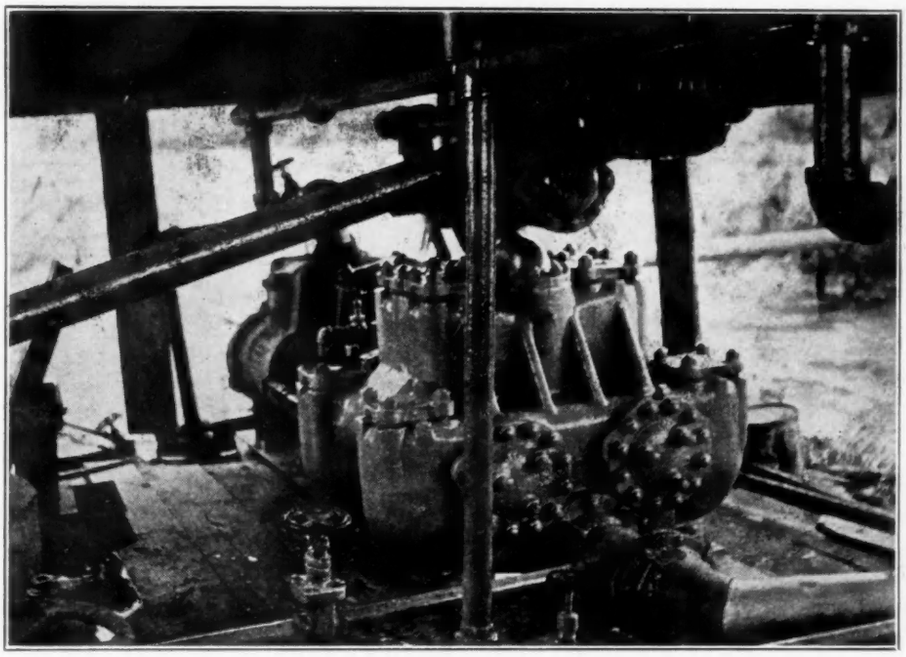

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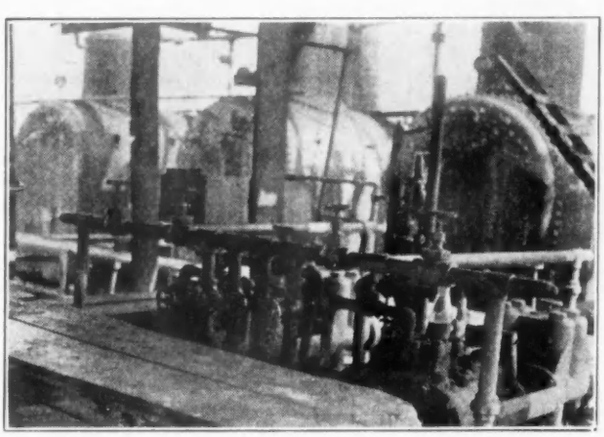

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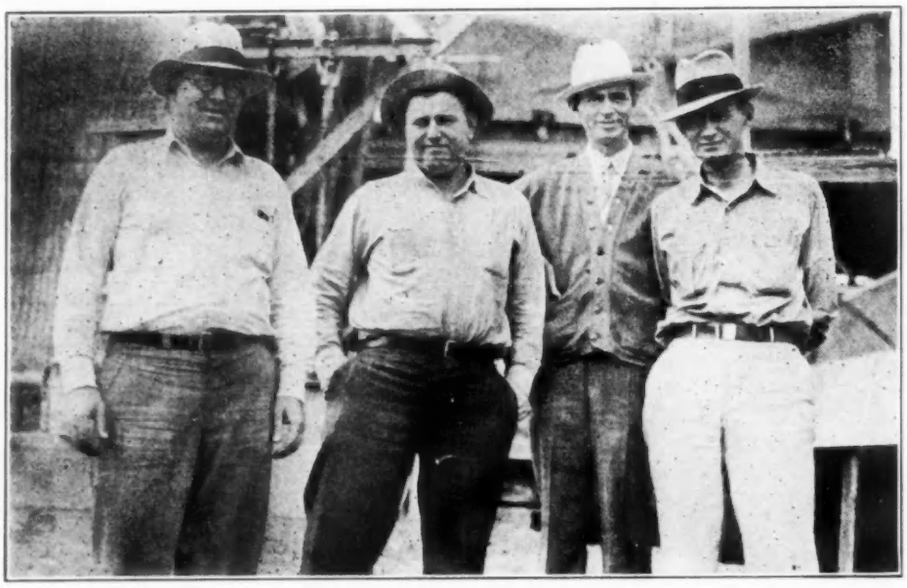


Reading left to right: O. V. Dill, district superintendent, Mid-Kansas Oil and Gas Company, Cement district; Y. Boles, evening tour driller; F. H. "Fish" Allen, field manager for Blackstock Drilling Company; H. E. McNees, geologist, Ramsey Petroleum Corporation

to a nearby well and mud fluid along with 445 barrels of oil were pumped into the hole. The casing came loose the following day and the remainder of the string was run and cemented with 1500 sacks, using 125 gallons of Hardenite as an accelerator. The casing point was at 5515 feet in sandy shale. From that depth open hole was carried until the total depth of 10,079 feet was reached. At that point the 16.6-pound, 4½-inch drill pipe had a dead weight of about 167,000 pounds and it was deemed advisable, if drilling was to be carried further, that a string of casing be run and three-inch drill pipe used. Accordingly a string of 9777 feet of 26.2-pound, Youngstown A.P.I., Grade D, 6⅝-inch casing was run. Before it was decided that the hole would be carried so deeply, 5600 feet of 26-pound, 6⅝-inch A.P.I., Grade D casing had been ordered and was on the rack. Ultimately, it was decided to use about 5400 feet of this casing, with the remainder of about 4400 feet of the new A.P.I. specification, Grade D, Special Alloy pipe on the top. The upper portion of the string has about eight more threads and a correspondingly longer collar. The new specification is as follows:

New A.P.I. Specification Grade D Casing

O. D.	I. D.	Thickness "K"	Threads per Inch	Taper per Foot	Weight per Foot	Diameter C. D.	Length "N"	Width Bearing Face "R"	Depth recess "q"	Diameter recess "Q"	Total Test Press. Lbs. per Sq. In.
6.625	5.855	.385	10	⅜	26.2	7.390	9.000	¾	⅝	6.71875	2800

Dead weight of the casing was 256,157 pounds, exclusive of the weight of the collars, which probably would make the total weight close to 260,000 pounds. Three floating devices were used. A Baker 6⅝-inch cement side hole float shoe was welded on the bottom joint. At the top of the bottom joint, a Bartlesville Supply Company, float collar filled with ligum-vitae wood, was used and on top of the next joint a Baker, cement filled float collar. All collars were welded from the bottom of the string to a height of about 200 feet. Calculated on the basis of mud fluid weighing 12 pounds per gallon and making no allowance for collars the buoyancy of the mud displaced by 9777 feet of 6⅝-inch casing, having an outside diameter of 6.625 inches, would be approximately 166,000 pounds, leaving a weight of only 94,000 pounds to be handled by the equipment as long as the float plugs were functioning.

October 15, casing was started into the hole. Halliburton Oil Well Cementing Company was employed to do the cementing job. Three cementing outfits were spotted, one being a Halliburton Super-Steam type, capable of mixing 50 sacks of cement per minute with one mixer, the second a regular steam outfit Number 170, and the third a motor driven unit capable of handling pressures in excess of 2500 pounds per square inch if necessary. This combination of cementing equipment was capable of mixing and pumping the cement into the casing at the rate of 100 sacks per minute.

J. J. Fromer, field superintendent in the Oklahoma City district for the Mid-Kansas Oil & Gas Company, designed a special cementing plug container, equipped with a stuffing box and pin to hold the upper plug until the proper time for release. High pressure rotary hose and fittings were to be connected to the special cementing head, which also was designed to permit use of the measuring line. A regular two-plug cementing job was anticipated.

Unexpected difficulties arose in the hole preparatory to the cementing of this long string. When the casing had been landed approximately 302 feet off bottom, circulation returns could not be gained and the hole started taking large amounts of fluid at 1600 pounds pressure. Later, when an attempt was being made to pump through the annular space between the 6⅝ and nine-inch strings, returns appeared at the surface between the surface and nine-inch strings. This indicated that the latter string was leaking probably due to excessive wear imposed through the drilling of more than 4500 feet of open hole through it. The space between the surface pipe and nine-inch was cemented off. After this cementing job had set another attempt was made to secure returns around the 6⅝-inch but the hole continued to take large amounts of fluid with no surface return. Anticipating a high bottom hole temperature, operators had mixed more than 25 tons of ice into the circulating fluid hoping to decrease the bottom hole temperature to such a point that it would not interfere with cementing operations. During the last drilling the mud fluid temperature at the surface was 112° F. with the slush pumps acting under about 1200 pounds pressure. No measurement was made of bottom hole temperature but it was expected to be near 200° F.

Failure to get surface returns of the circulating mud indicated that an ordinary cementing job could not be done successfully and the operators decided to drill out the float

collars and shoe and use the reverse method. Remembering, that the dead weight of the string was close to 130 tons, some idea of the great tension to which the upper portion of the string was subjected may be gained. While drilling on the float it may be seen that the upper joint of 6⅝-inch casing was carrying the weight of the casing string and a portion of the weight of the drill pipe, a load which, although problematical, likely was in excess of 300,000 pounds.

After the floats had been drilled out a most unusual problem had to be solved. High pressure gas from a sand at 8735 to 8820 feet threatened to blow 11-pound mud out of the hole and resulted in the installation of a blowout preventer while drilling below that depth. With the 6⅝-inch casing set below this sand it became apparent that considerable cement would have to be placed behind that string to lessen the danger of collapse should it become necessary to bail the hole down. It was also thought advisable to place cement between the 6⅝-inch and the apparently ruptured nine-inch casing. These factors resulted in the operators deciding to use a reverse method instead of the usual two-plug process of cementing. Since no measuring line could be used if cement were pumped between the two longer strings, the matter of calculating the amount of cement necessary, was exceptionally hazardous due to the fact that diameter of the hole below 5515 feet was not definitely known. As a matter of safety 1875 sacks of cement were introduced between the 6⅝-inch and nine-inch strings, returns being gained through the former string. Operators were of the opinion that the cement failed to reach the lower joints of 6⅝-inch casing and that there was no cement around the casing shoe. Assuming that this supposition were true it would then be possible to pull a "squeeze"

Equipment Used in the Preston Culp 6

TABLE 3

Items	Name of Equipment	Types
Admixtures	Baroid and Acquagel	
Brake lining	Rusco and Manhattan	
Bits	Hughes Tool Company	Hard formation
Blow out preventer	McEvoy	Nine-inch, manually operated
Boilers	Kewanee	4-125 H.P., 300-pound W.P.
Burners	V-Z	Low pressure
Cat Head	Hill and Foster	Automatic
Casing	Youngstown Sheet and Tube	Described elsewhere
Chains	Link-Belt	Hyper chain
Cementing	Halliburton	
Derrick	Parkersburg Rig and Reel	5033-A, 122-foot, 24-foot base
Draw Works	Ideal-National Supply	No. 34-26, 7½-inch roller bearing
Drilling line	Roebling	1⅛-inch, blue center 6x19
Dog house	Star	All steel
Drill pipe	National	6⅝ A.P.I. 25.5 lb. to 5588 feet.
Drill pipe	National	4½ A.P.I., 16.6 lb. to 10,079 feet.
Elevators	Wilson and Byron-Jackson	XXX
Engine	Ideal-Ajax	12x12 roller bearing twin
Fishing Tools	American Iron & Machine Works	Releasing and circulating overshot.
Float plugs	Baker Tool Company	Cement filled shoe and collar
Float plugs	Bartlesville Supply Co.	Wood filled
Formation tester	Halliburton	
Manifold valves	Gill	
Grease	Conoco and Texaco	Crater
Gates	Hughes Tool Company	9-inch, 5000-lb. test, master gate
Hose	Manhattan	3-inch rubber to 5588 feet
Hose	Champion-Barber	3-inch, all steel to 10,079 feet
Indicators	Martin-Decker	Weight and pump pressure
Lubricators	Badgett	Sight feed
Mud Valve	Ideal	Type F
Pumps	Ideal	2—14½x7½x18 slush—250 lbs. steam, 1500 lbs. water
Pumps	Worthington	2—10x4½x10 boiler feed
Pumps	Gardner-Denver	1—10x3x? auxiliary pump
Slips	Ideal	
Swivel	Ideal	Type A
Steam separator	Ideal	
Throttle valves	Brown	
Rotary hook	Ideal	Nine-inch
Tool joints	Ideal	5½-inch O.D., A.P.I.
Tongs	Wilson	
Blocks	Reagan	5—36-inch sheaves, 76-inch travelling block
Blocks	Reagan	Double-Decked, 4—36-inch sheaves, 2—24-inch

Note: The writer through conversation with drillers and tool pushers on the derrick floor has attempted to list all equipment, other than small tools and fittings, that were used in the Preston Culp 6. Any omissions are due to oversight.

The men who put down the Preston Culp 6. Reading left to right: Front row, H. E. McNees, geologist, Ramsey Petroleum Corporation; L. W. Jones, geologist, Mid-Kansas Oil and Gas Company; O. V. Dill, district superintendent Mid-Kansas Oil and Gas Company, Cement district. Middle row: Jim Hughes, sample catcher, Mid-Kansas Oil and Gas Company; Pete Weiss, derrick man; B. Goodwin, pipe racker; D. B. Butler, fireman; Y Boles, driller, Blackstock Drilling Company. Back row: Pat Dailey, sample catcher, Mid-Kansas Oil and Gas Company; Jess Collins, fireman; George Allen, floor man; J. D. Bailey, derrick man; W. M. Bill Bailey, driller, Blackstock Drilling Company. Not in the picture: C. L. De Voe, morning tour; Sam Chapman, evening tour

Comparison of Deep Tests

TABLE 4

Name of Test	Location	Total Depth	at T.D.	Comm. Drilling	Compl. Drilling	Casing Program: Size in Inches of Casing Set at Various Depth							
						22	16	13⅜	12½	9⅝	6⅝	5¾	9
Pen-Mex Fuel Co. Jardin 35	Vera Cruz, Mexico	10,585′	8 9/16″	2-22-30*	8-30-31	190′	2236′	2732′	None	5200′	None	None	None
Mid-Kansas & Ramsey, Preston Culp 6	Cement pool, Caddo Co., Oklahoma	10,079′	8 1/8″	1- 4-31	10- 6-31	None	None	None	64′	None	9777	None	5515
Chancellor-Canfield-Midway, Hobson 2-A	Rincon field, Ventura Co., California	10,030′	4 3/4″	8- 8-29*	5-15-31*	**	**	**	**	**	**	7479′	**

* Approximate
** No record

job through tubing and the string could have been successfully cemented.

A change in plans caused operators to decide to plug back by stages, shoot the casing, and test the upper sands in which several nice showings of oil and gas had been encountered. At the present time the hole has been plugged back to about 6100 feet and no production of commercial importance has been announced.

Three fishing jobs marred an otherwise perfect drilling record but two of these were of such minor importance that they deserve little more than mention. The third, although successfully completed within a few hours, is notable because it established a new record for deep fishing and demonstrated the extreme conditions under which modern rotary fishing equipment may be used with a feeling of confidence. The first job came at a depth of 4430 feet, when the bit and drill collar were recovered in less than 12 hours. No further difficulty was experienced in this respect until a depth of 10,079 feet had been reached. At 10,054 feet the bit had gone into a hard sandy shale. While coring this formation at 10,078 feet the bit encountered a hard streak through which it could not penetrate. A hard formation rock bit cut only one foot and when pulled from the hole was badly worked. From the nature of the wear it was believed that the margin or perimeter of the hole had been cut, leaving a hard central cone which held the cones off bottom and imposed excessive wear on the bit head. While making further attempts to get through this streak or at least to cut enough that a sample could be obtained, the 4½-inch drill pipe twisted off approximately 315 feet below the derrick floor. At two o'clock in the afternoon, less than six hours after the twist-off occurred, an American Iron and Machine Works, 7½ inch O. D., releasing and circulating overshot was started into the hole. Two hours later the overshot reached the surface with approximately 9764 feet of drill pipe and tools below it. Further details were presented on pages 33 and 34, November 6, 1931, issue of The Oil Weekly.

The third and last fishing job took place after the 6⅝-inch casing had been cemented. Going into the hole with 3½-inch drill pipe to clean out to bottom, operators had made but little progress when the Kelly joint twisted off below the swivel sub, dropping the pipe and Kelly 19 feet below the rotary table. This time a 5⅝-inch O. D. releasing and circulating American overshot went into the hole and came out with approximately 150,000 pounds of 3½-inch drill pipe. It is impossible to accurately determine the amount of strain placed on the equipment during these two fishing jobs but there can be no denial that a real test was given both the equipment and the skill of the men using it. Extreme care, dependable equipment, and the indispensable Martin-Decker weight and pump pressure indicators, unquestionably are due the credit for converting what might have been a lost hole into an accomplishment which can be pointed to as a distinct contribution to the advancement of rotary drilling.

Geological Knowledge Gained

The geological knowledge gained through the drilling of the Preston Culp 6 is relatively unimportant as compared with the mechanics. When it was decided that the test should be carried deeper in search of Wilcox sand production, operators hoped that an Oklahoma City geologic section would be found. Average depth to the Wilcox sand in that area is approximately 6400 feet and average thickness of the Permian section about 1400 feet. In the Cement area, wells on structure have encountered an average of about 3400 feet of Permian section. Comparing the average thickness of the Permian in these two areas and assuming that the pre-Permian section would be no thicker than at Oklahoma City, it was hoped that Wilcox sand would be encountered at a depth not exceeding 8400 feet. Study of well cuttings has revealed the existence of a local unconformity in the Cement area, apparently not present

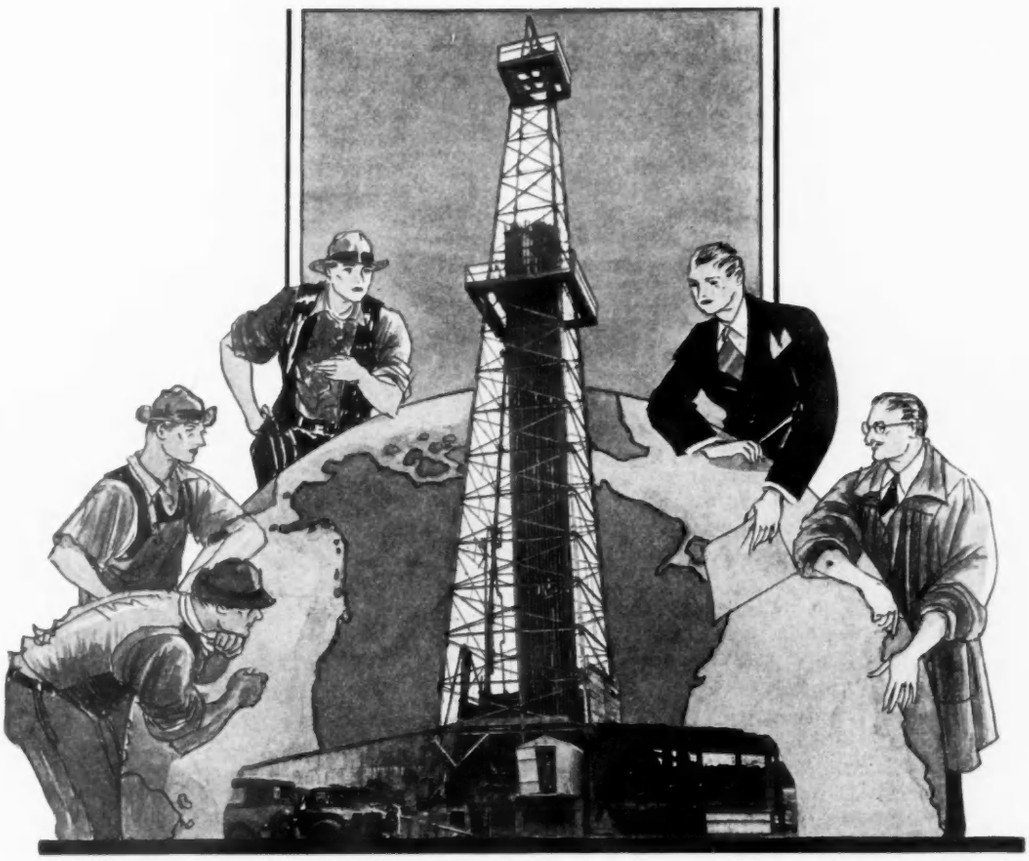
CREDIT • • •

WHERE CREDIT IS DUE

We congratulate the Mid-Kansas Oil & Gas Company and The Ramsey Petroleum Corporation upon their contribution to the oil industry and to Oklahoma, in drilling the deepest well in the United States, West Cement Field, Caddo County, Oklahoma.

It was a distinct pleasure to us to be chosen by these leading producers, as their drilling company, and to have a part in an undertaking that means so much to the future of the petroleum world.

H. L. BLACKSTOCK DRILLING CO.



The Eyes of the Oil World Are On This Well

Of Course, the Derrick is "PARKERSBURG"

THE success of every unusual drilling operation is founded upon two factors: the energy and resourcefulness of the crews and the dependability of the equipment. In the Preston Culp 6 deep test, Parkersburg takes pardonable pride in the fact that a Parkersburg Derrick was instrumental in helping the crews reach the tremendous depth of 10,079 feet.

The Parkersburg Rig and Reel Company joins with the rest of the oil world in congratulations to the crews, operators and owners.

The Parkersburg Rig & Reel Co.

Executive Offices and Main Plant

Parkersburg, West Virginia, U.S.A.

NEW YORK - TULSA - DALLAS - HOUSTON

BRANCHES IN ALL ACTIVE FIELDS

at Oklahoma City. Had it been found that portions of the upper and lower Pennsylvanian section were cut out in the Cement area the Preston Culp 6 might have encountered pre-Pennsylvania higher than 8400 feet but that question is entirely problematical and one guess is as good as another. The reverse of what had been hoped for was encountered. Instead of a thickness of approximately 5000 feet of Pennsylvania section as is encountered in Oklahoma City, the Mid-Kansas and Ramsey test went into that series at about 3440 feet and apparently was in the lower portion of the formation at 10,079 feet. This gave a Pennsylvanian thickness of more than 6600 feet with an undermined amount left to penetrate.

Fusilina study by several of the paleontologists indicated that the formation at about 10,000 feet is Deese or its equivalent while others were of the opinion that the test stopped in Dornick Hills member of the Pennsylvania. It is impossible even for those who have studied the cuttings closely to determine the amount of formation intervening between the bottom of the hole and the base of the Pennsylvanian. Geologically the test is relatively shallow and the information, so far as oil exploration is concerned, is negative.

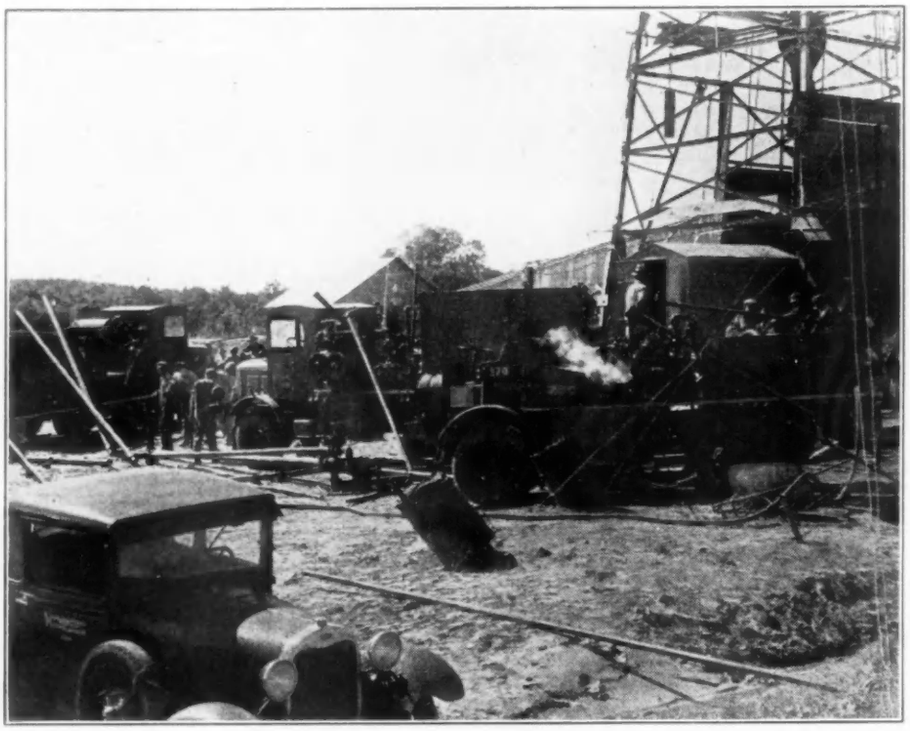
The following showings of oil and gas were encountered below the usual producing depth in the Cement pool:

4555 to 4575 feet	Dark brown oil sand
6038 to 6077 feet	Oil sand
6767 to 6769 feet	Gas sand
7098 to 7111 feet	Oil sand ?
7185 to 7220 feet	Sand not cored
7305 to 7330 feet	Oil and gas sand
7495 to 7560 feet	Sand not cored
7690 to 7745 feet	Oil sand
8115 to 8135 feet	Sand not cored
8260 to 8290 feet	Gas sand
8360 to 8410 feet	Gas sand
8558 to 8585 feet	Sand not cored
8735 to 8820 feet	Gas sand
8830 to 8835 feet	Gas sand
8860 to 8870 feet	Gas sand not cored
9700 to 9875 feet	Sand not cored
10,054	Hard white xlyn lime, slightly sandy, no recovery

Results of Acid Bottle Survey and Measured Angles of Dip On the Cores

Depth	Angle of Deviation	Core Dept	Angle of Dip
250	2 degrees	7302 to 7312	16 degrees
500	2 "	7321 to 7330	13 "
750	2 "	8395 to 8406	13 "
1000	2 "	9265 to 9280	19 "
1250	3 "	9365 to 9380	18 "
1500	2 "	7330 to 7340	15 "
1750	2 "	7745 to 7752	20 "
2000	2 "	8410 to 8419	15 "
2250	2 "		
2500	3 "		
2750	3 "		
3000	4 "		
3250*	4 "		
3500	5 "		
3750	5 "		
4000	5 "		
4250	6 "		
4500	4 "		
4750	4 "		
5000	2 "		
5250*	2 "		

*Survey discontinued at this point



Hook-up of three Halliburton Cementing Outfits for world's deepest cementing job on 9777 feet of 6⅝-inch, 26-pound A. P. I. casing, Mid-Kansas Oil & Gas Company and Ramsey Petroleum Corporation's Culp 6, Cement, Oklahoma. The three units include a super-steam outfit, regular steam outfit and one motor driven. This combination was capable of mixing 100 sacks of cement per minute and pump fluid at pressures above 2500 pounds per square inch, should the emergency arise

Conclusion

When the Preston Culp 6 is finally completed it will have cost in excess of $200,000. No small amount of credit is due Mid-Kansas Oil and Gas Company, which was operator on the test. Space would not permit mention of the names of the long line of engineers, metallurgists, practical oil men, and those of the rotary profession who made the accomplishment possible. However, it would be amiss not to mention the names of O. V. Dill, district superintendent for Mid-Kansas Oil and Gas Company, who was with the test from start to finish and who knows more of the intimate details than any other individual engaged in the undertaking; F. H. "Fish" Allen, who represented Blackstock Drilling Company during a majority of the drilling time; J. J. Frommer, district superintendent for Mid-Kansas Oil and Gas Company in Oklahoma City district; and the drilling crews of Blackstock Drilling Company.

62

Wells cemented by Halliburton in East Texas in one day (Sunday at that) without delay to anyone.

Only an established organization can be depended upon when emergencies arise.

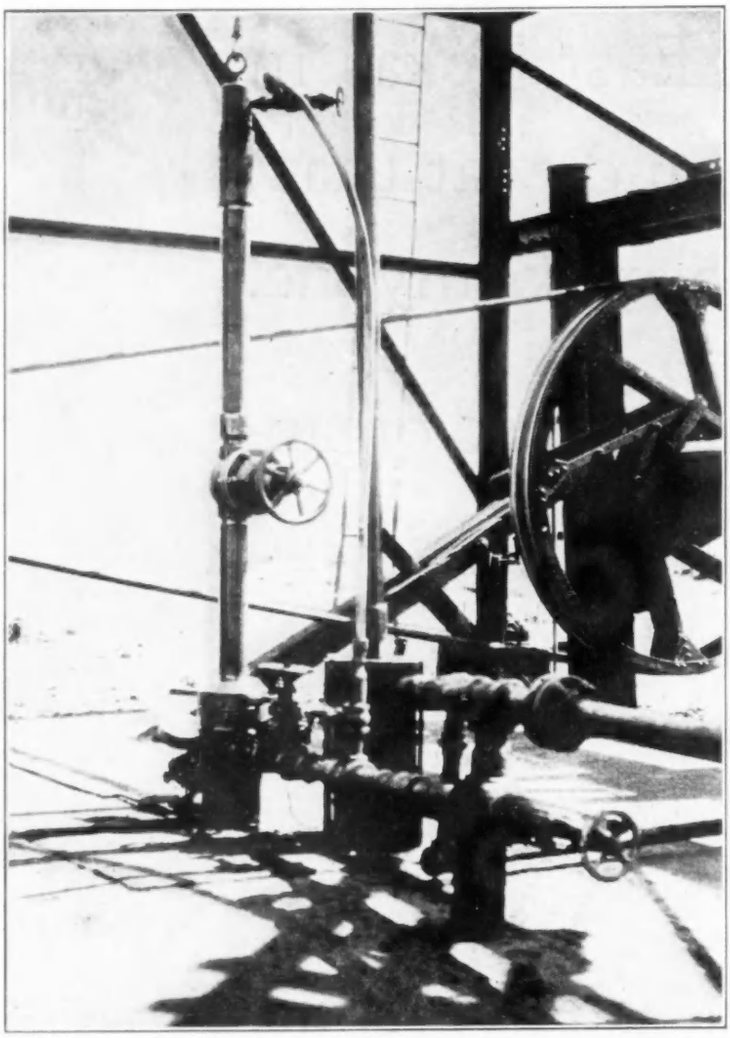
HALLIBURTON
OIL WELL CEMENTING CO.
Duncan, Oklahoma

Plunger Lift Makes Flowing Wells Out Of Pumpers

Research develops new method for raising fluid in wells using either formation or injected gas

By H. W. FLETCHER
Chief Engineer, Hughes Tool Company, Houston, Texas

RAISING oil economically from deep wells is technically a more difficult problem than is at first apparent. The fluid is often a mixture of oil, sand, salt water, and gas and may contain paraffin and hydrogen sulphide. Even such a combination could be handled readily were it not for the high lifting pressures, often exceeding 1000 pounds per square inch, frequently encountered. High lifting pressures require close fitting pump plungers or equivalent to cut down piston leakage. Maintaining these close fits in the presence of sharp sand is a difficult problem, intensified by the fact that the pump is in a relatively inaccessible location near the bottom of the well. High lifting pressures also result in relatively large and alternating stresses in the sub-surface equipment, which in the presence of salt water or hydrogen sulphide, result in corrosion fatigue, producing mechanical failures and consequent costly shut down.



Showing surface arrangement of equipment on installation of the Hughes Plunger Lift

Since these troubles are intensified by increased height of lift, it seemed that some radical departure must be made from orthodox pumping methods to provide more satisfactory performance at present pumping depths, and to handle the deeper wells that must inevitably be produced in the not distant future.

In an attempt to avoid the disadvantages inseparable from lifting systems where pressures of 1000 to 1500 pounds per square inch are common, Hughes Tool Company some eight years ago began a series of experiments which have culminated in the development of a new method of lifting fluid from deep wells. Figure I illustrates the apparatus which consists essentially of a special string of reamed tubing supported in a flow head and carrying at the lower end a footpiece. This tubing must be truly round and of accurate internal diameter, but is not necessarily highly polished. The coupling threads must be accurately aligned to avoid any offset in the bore of the two pipe ends joined by the coupling. It is not possible to use commercial pipe and couplings for this reason, but the pipe must be reamed full length to secure the necessary accuracy. Traveling in this tubing is a free plunger of stainless steel or some similar corrosion resisting material, and consisting of a hollow shell fitted at the lower end with a dart shaped check valve loosely held in place by a cage attached to the lower end of the plunger sleeve. This plunger makes a complete trip from the footpiece to the flow head and return each stroke, and brings up a relatively short column of fluid, say two or three hundred feet at a time. The motive power is compressed gas, either furnished naturally by the formation, or supplied through the casing valve from a compressor station or pipe line.

The operation of the equipment is as follows:

The tubing is run into the hole to a point where the

footpiece is at the desired distance below the estimated pumping level of the well, and the surface equipment assembled as shown. The plunger is then inserted in the surge chamber and the plunger trap valve is slowly opened. When the gate of this valve has been withdrawn a little more than half way, the check valve in the plunger falls to the open position by gravity. As this gate is further withdrawn, the entire plunger is released and falls with a velocity of from 40 to 50 feet per second until it reaches the fluid and then with a speed of from six to eight feet per second until it reaches the seat. The plunger valve is so designed that it will not close while falling either through the gas in the tubing or through the fluid. When the plunger reaches the seat, it seals the seat opening and gas pressure consequently builds up under the plunger valve. A few pounds pressure is sufficient to raise this valve to the closed position and further increase in casing pressure is then exerted over the whole cross section of the plunger, raising it with its load of fluid to the surface. When the top of the fluid column reaches the slots in the nozzle, the fluid spills off into the flow line, and as the load is reduced the plunger rises more and more rapidly. Some oil accumulates in the stack directly above the nozzle and when the plunger finally passes the slots and strikes this oil, the pressure set up in the plunger body opens the plunger valve and allows the plunger to again fall to bottom.

The well, of course, heads up during the installation of the apparatus and consequently the fluid level falls as production proceeds and successive heads become smaller and smaller until that point is reached where the fluid comes into the well at the same rate at which it is removed, after which cycles repeat, discharging a uniform quantity of fluid per stroke with astonishing regularity. Figure 2 shows a pressure chart from the discharge of a well starting up after Sunday shut-down at about 8:20 a.m., pumping down the accumulated head to a large extent within the first three hours. Figure 3 shows a chart from this same well on the last day of the week and illustrates steady operation.

Required Pressure Low

It is obvious that the lifting pressure required is low and practically independent of the depth of the hole. On the other hand the quantity of gas required depends largely on the distance through which the load is lifted, since the entire length of tubing must be filled with gas each stroke to a pressure equal to that which exists below the plunger at the time the plunger reaches the nozzle. In addition there is a loss of gas while the plunger is falling which can be estimated with fair accuracy from the percentage of total cycle time during which the plunger is falling. It is not necessary that the plunger fit the tubing closely for the reason that the difference of pressure tending to force gas past the plunger is only that amount required to support the weight of the plunger alone, which is only two or three pounds per square inch, and because in traveling up the pipe a film of fluid is continuously wiped into the space between the plunger and tubing, maintaining a fluid seal that effectively prevents any gas leakage at so small a pressure difference. Figure 4 shows a series of curves indicating the number of cubic feet of free gas required per barrel of fluid lifted to fill the tubing from footpiece to flow head to a pressure 20 per cent in excess of that required to counterbalance the weight of the fluid lifted (the excess pressure being required to overcome friction) and disregarding the expansion of the gas in the tubing which takes place where the head of oil lifted each stroke is an appreciable percentage of the total lift. These curves do not take into account the loss of gas while the plunger is falling, which must be estimated as indicated above. It is obvious that if the footpiece was set so shallow that only

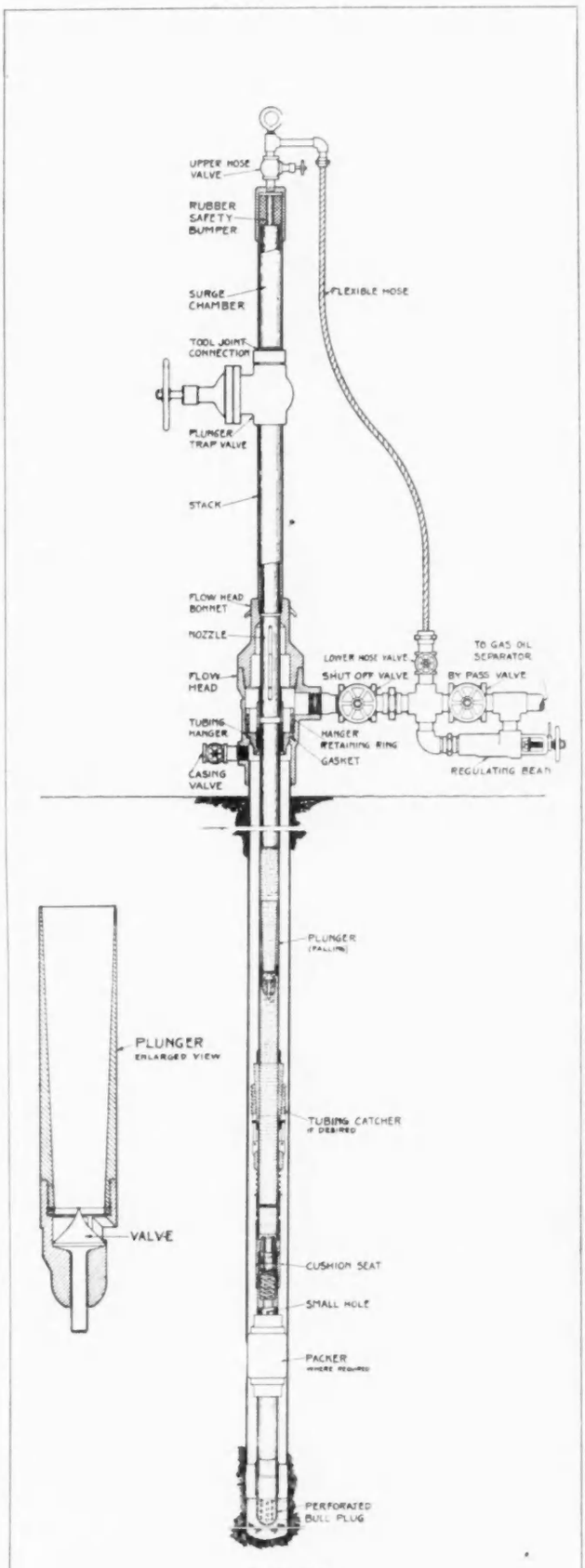


FIGURE 1

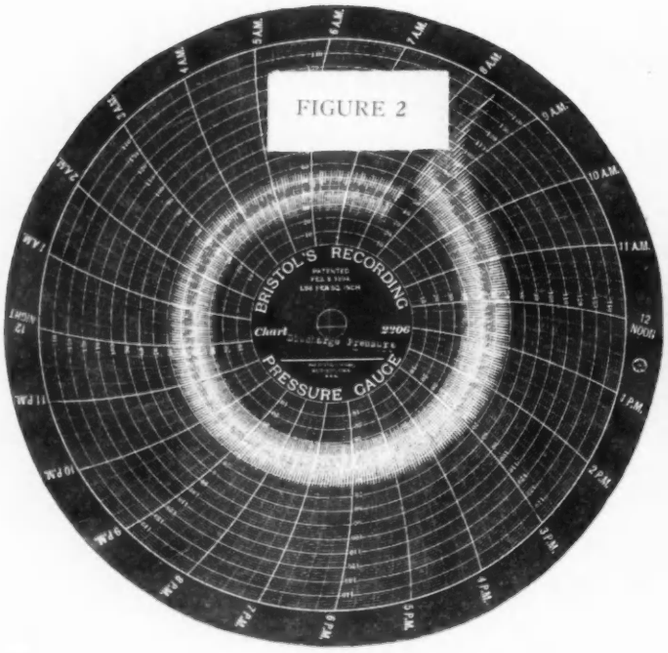


FIGURE 2

RECORD OF DISCHARGE PRESSURE

Two and one-half-inch tubing, lift 1450 *feet; production* 72 *barrels,* 333 *strokes per day. Pick-up* 0.216 *barrels per stroke*

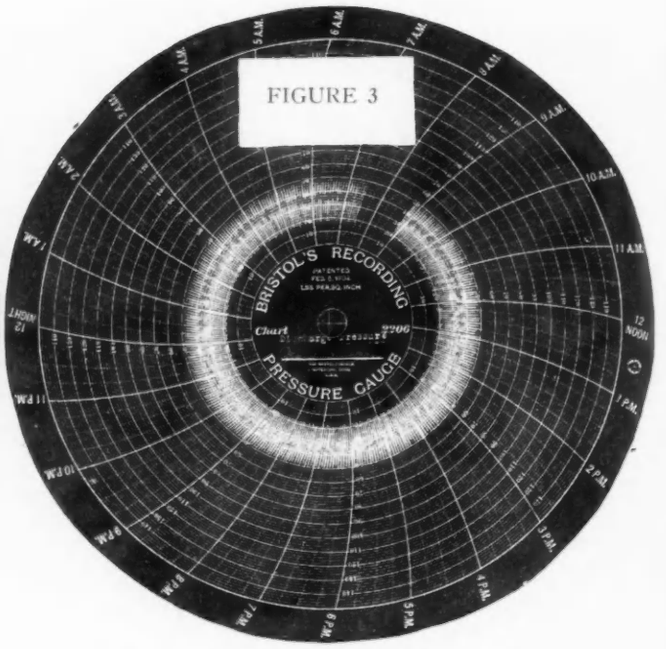


FIGURE 3

RECORD OF DISCHARGE PRESSURE

Two and one-half-inch tubing, lift 1450 *feet; production* 74 *barrels,* 339 *strokes per day. Pick-up* 0.218 *barrels per stroke*

a tea-cup full of fluid were picked up each stroke that the gas-oil ratio in cubic feet per barrel would be enormous since the entire string of tubing must still be filled with gas each stroke at a pressure slightly above atmosphere, whereas the amount of fluid produced would be negligible. On the other hand the curves indicate that there is not much to be gained in reduction of gas-oil ratio by picking up in excess of 200 feet per stroke except perhaps in extremely deep wells. It is obvious, therefore, that lifting pressures need not be greater than 100 pounds per square inch except where it is desired to produce more fluid than can be handled at the lower pressures. Field experiments to date have demonstrated that 500 cubic feet of gas per barrel of fluid for each 1000 feet of lift is ample to maintain steady operation, and several experiments have been made where satisfactory performance was secured with considerably less than 300 cubic feet of gas per barrel of fluid per 1000 feet of lift. The operation of the equipment is inherently stable, that is the apparatus automatically adjusts the height of the fluid column picked up each stroke to a point where the available gas is just sufficient to supply the requirements. Any reduction in the gas supply increases the fluid picked up each stroke and conversely an increase in gas supply reduces the pickup.

A continuous record of the performance of this equipment is readily secured by installing a two-pen pressure recorder, one pen connected to the casing head and the other to the flow lines just ahead of the choke. The pumping level is accurately known at all times since the number of feet of fluid picked up each stroke can be easily determined by dividing the total production by the number of strokes shown on the chart, which gives the amount of fluid lifted each stroke. Knowing the size of the tubing, it is simple to compute the number of feet of fluid picked up each stroke and subtracting this figure from the total depth

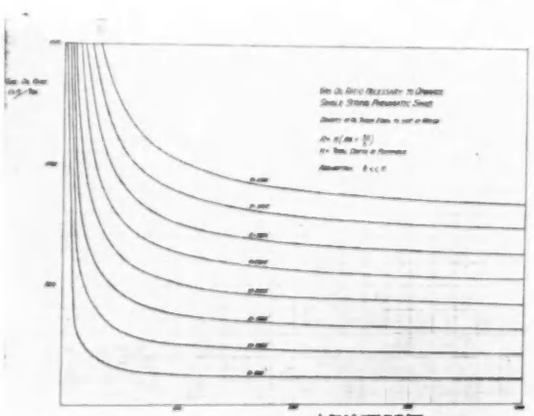


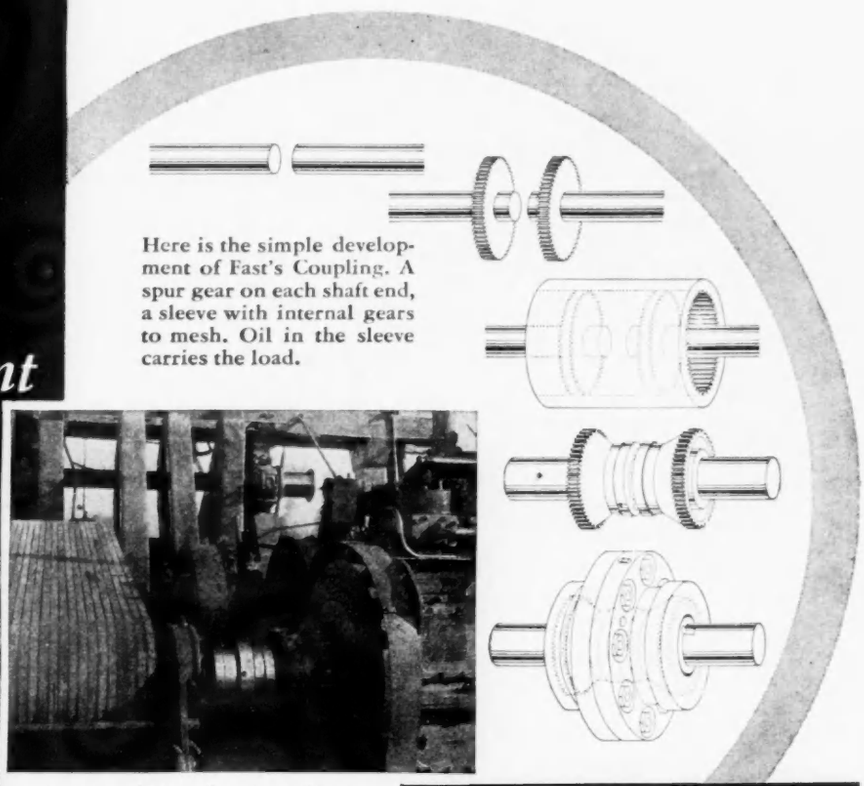
FIGURE 4

Standard Plunger Paraffin Scraping Plunger

FIGURE 5

SPECIFY FAST'S *on New Equipment*

Stop Coupling Shut-downs



Here is the simple development of Fast's Coupling. A spur gear on each shaft end, a sleeve with internal gears to mesh. Oil in the sleeve carries the load.

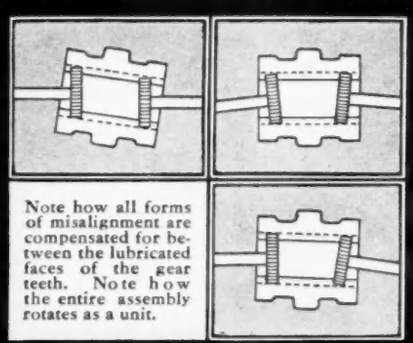
Fast's Coupling at the Magnolia Petroleum Corporation, Wewoka, Okla.

FAST observed that nearly all coupling shut-downs, with their attendant loss of time and stopping of production, were caused by the failure of a flexible pin, spring, disc, washer or grid. "Why not do away with these flexible parts?" he asked. "Then we will do away with coupling shut-downs."

The diagram will show you how well he succeeded. Not a single flexible part to fatigue or fail. Not a single part that must be replaced periodically. Nothing but a simple mechanical assembly, in which all forms of shaft misalignment are compensated for between the lubricated teeth of generated gears. The oil carries the load; there is nothing to wear out.

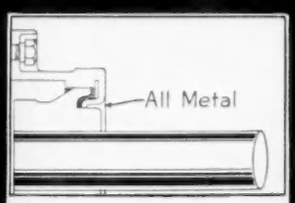
Such a simple assembly will last as long as the connected machines, when oiled periodically like any other piece of transmission equipment—and be utterly free from all the causes that bring on shut-downs.

Wouldn't it interest you to save thousands of dollars for your plant by abolishing coupling shut-downs? Then write today for our catalog that shows a Fast Coupling for almost every need of industry and contains further information about Fast's Self-Aligning Couplings.



Note how all forms of misalignment are compensated for between the lubricated faces of the gear teeth. Note how the entire assembly rotates as a unit.

Permanently Dust-proof



Not a single flexible material, not a single rubber or felt washer is used in Fast's Coupling. All metal to metal contact prevents dust, grit, fumes, or moisture from getting into the working assembly. Due to this exclusive principle, Fast's Couplings never cause shut-downs because of internal wear due to foreign substances.

FAST'S *Self-Aligning* COUPLINGS

THE BARTLETT HAYWARD COMPANY

SCOTT AND McHENRY STS., BALTIMORE, MD.

Checks and Double Checks!

When a well survey is made with the SURWEL Gyroscopic Clinograph two runs are made—one going into the hole and another when coming out. Both results are plotted and must check before our operators consider the run successful.

We **guarantee** that the location of the bottom of the hole in each of the two runs check each other within 1% of the depth of the hole. So accurate is a SURWEL Clinograph that we have always been able to be even better than our guarantee.

If you want to know more about this remarkable surveying instrument and the service costs write for descriptive catalog. We will at the same time tell you about the SYFO Clinograph, for surveying drilling progress.

Sperry-Sun Well Surveying Company

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Philadelphia, Pa.

Dallas, Texas: 1501 Caruth St.

Houston, Texas: 1417 Esperson Building

Tulsa, Oklahoma: 402 Petroleum Bldg.

Los Angeles, Calif.: 415 Petroleum Securities Building

Tyler, Texas: Bell Building, 209 N. College St.

Calgary, Alberta, Can.: Room 1, Central Block

SURWEL *Clinograph*

of the footpiece gives at once the effective pumping level for the day.

Regulation of production is secured mainly by adjusting the footpiece to such a point as will maintain the desired back pressure at the bottom of the hole, but may be controlled to a considerable extent by regulation of the bean in the flow line, provided there is sufficient gas available to produce the well against a choke. Since the total gas required per stroke increases with the lifting pressure, it is obvious that if this pressure is raised by choking and the amount of fluid discharged per stroke is reduced, the gas-oil ratio required for operation must increase.

There is little about this apparatus to cause trouble since the weight of the fluid lifted is not supported by the equipment but by gas pressure, and the plunger has a clearance of 1/32-inch or more in the tubing. If, however, it is for any reason desired to fish the plunger from the well, this is readily accomplished by a light spear on a small line. In normal operation the plunger may be removed for examination at any time as follows:

The shutoff valve in the flow line is closed and the upper and lower hose valve is opened. On the next discharge stroke the fluid discharges through the top of the surge chamber and the flexible hose, and the plunger follows it to the rubber safety bumper. When the plunger contacts with this bumper, it seals off the gas and shuts the well in, and the plunger is held in place by the gas pressure below. The plunger trap valve may then be closed, the surge chamber unscrewed and the plunger removed for examination. The entire operation can be easily accomplished in five or 10 minutes.

Figure 5 shows a cut of the standard plunger, and also of a special plunger developed for scraping paraffin. This paraffin scraping plunger has made some very successful runs in a territory where paraffin troubles are quite severe, the only attention required being to screw the flow bean in the discharge line down to its seat and reset to the proper opening twice a day to prevent clogging of the discharge by the paraffin removed from the tubing.

That this method of pumping has accomplished the desired results to a vary high degree is obvious from the consideration of the construction and method of operation. Since lifting is accomplished at low pressure, no close fits are required and hence wear from sand in the fluid is of decidedly minor importance. Crooked hole does not affect operation provided tubing can be run in the well without kinking to a point where the tubing wall caves in. Gas does not reduce the volumetric efficiency but on the contrary provides the power for lifting the production, while paraffin troubles are reduced mainly to the problem of keeping the flow lines and tanks steamed out.

Where formation gas is adequate in amount to produce the fluid production of the well, the lifting cost with this equipment is obviously comparable with that of a flowing well. Where outside gas must be supplied to supplement formation gas, the lifting cost will depend, of course, on the cost of providing this gas at pressure, but here again the overall cost will be surprisingly low, partly because of the low pressures required but largely because of the great reduction in maintenance due to the fact that no parts of the equipment are highly stressed. Where gas is not available, compressed air may be used except where salt water is encountered in which case corrosion is so severe as to interfere with proper plunger action. Due to the fact that it is not possible to determine the pumping level in a given well in advance, several experimental settings are usually required to locate the proper position for the footpiece, but once this factor has been determined, the apparatus will function for long periods with a minimum of attention.

Markets • Production • Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

Stocks Outside California Lower, With Production Off

The effect of production curtailment was shown last week when stocks, outside of California were reduced at an indicated rate of about 26,000 barrels a day. Production, according to estimates of the American Petroleum Institute, declined 31,950 barrels a day, reducing the daily average of the United States to 2,161,500 barrels daily. Because of continued excessive production in California, however, national daily production exceeded current market requirements by about 17,000 barrels.

California's daily average production continued to exceed market requirements to the extent of about 43,600 barrels, although information received from that state indicates that premiums are being paid for crude in some sections. This situation is extremely conflicting with actual economic conditions in California and cannot be sustained for any great length of time. In fact, there is little evidence at hand to justify the paying of premiums for California crude, when the facts at hand point to a continued over-production. The present daily market demand for California crude is about 456,000 barrels, while production continues to exceed 500,000 barrels; last week's daily average being 508,600 barrels. At any rate, judging from gradually returning gestures of price-cutting tendencies in the retail gasoline market, the paying of premiums is probably only a momentary flash in the pan.

Oklahoma production continued downward last week, when the daily average of the state declined 29,850 barrels, dropping to a daily average of 411,700 barrels. This marked the first time in many weeks that Oklahoma crude stocks were drawn upon to supply market requirements. The chief reason for this reversal in the supply situation was the sharp drop in production of Oklahoma City. There, the demand has fallen severely as a result of curtailment in refinery purchases. Crude from other sections of the state, however, has not been affected as severely as the Oklahoma City grades, resulting in an offset withdrawal from stocks for the state as a whole.

Oklahoma production last week was below the market allowable by 23,300 barrels, while stocks were actually drawn upon by both Oklahoma and Kansas to the extent of 14,900 barrels.

Texas showed practically no change in production last week, the state total having declined 150 barrels from the preceding week. Production was in practical balance with current market requirements, the indicated addition to storage for the week showing a daily average of about 8300 barrels. East Texas reported a daily average output last week of 332,750 barrels, or 350 barrels less than for the preceding week. The completion of 68 new wells in East Texas spelled an additional daily allowable output of 6800 barrels, although cooperative efforts revealed by production reports are expected to attach but little significance to new well completions or rated initial production. The initial reported for new wells completed last week amounted to about 610,000 barrels. Panhandle, Texas, production showed an increase last week of 3650 barrels, while West Texas production was lower by about 1500 barrels. Production of the Texas Gulf Coast was up about 450 barrels, while that of the Louisiana Gulf Coast increased 550 barrels a day. The combined gain in the Gulf Coast amounted to 1000 barrels a day. Other increases in production last week were recorded by North Louisiana, Arkansas and Rocky Mountain States. Eastern States reported a combined decline last week of about 1050 barrels a day.

The indicated excess production over market requirements since January 1, has amounted to nearly 1,000,000 barrels, which is not considered unfavorable in view of the consistent drop in seasonal market requirements. If last week's continuation of convergence between production and market requirements represents a criterion of what to expect in succeeding weeks, it is practically certain that better times are not far off.

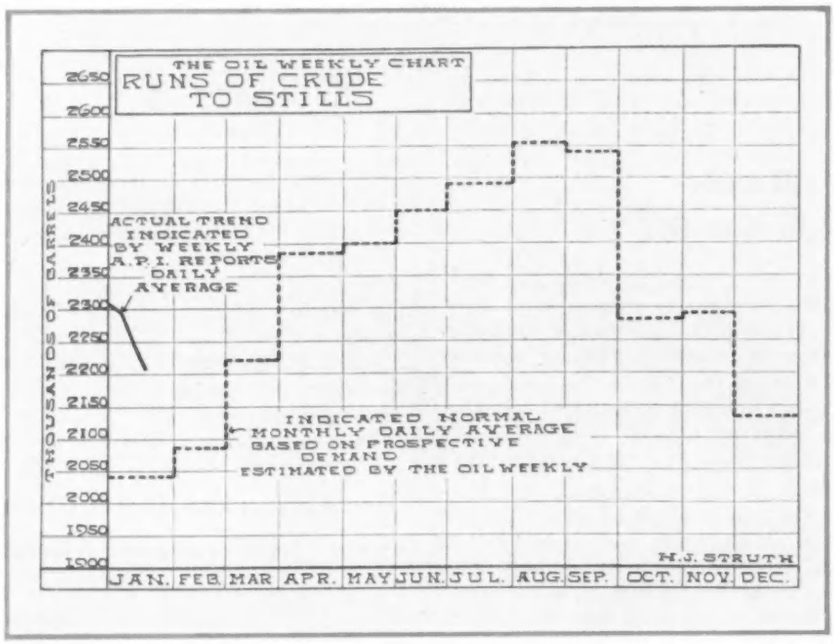
Most Operators in California Favor Adherence to Allowable

A strong cross current of opinion as to the best course to pursue exists in California, with the bulk of the major and larger independent operators favoring adherence to the lower allowable, and several operators holding to the claim that a state output much lower than the present is impractical. In the face of reports that a production of 456,700 barrels will be sufficient for the first six months of 1932, many companies can not understand why the present output is too high. They do have reasons for this argument, but it is questionable whether their objections are well founded.

Despite a supposed overproduction, many small refiners are finding it difficult to obtain a supply of crude oil on which to operate their plants. Premiums are being paid by a few, in the face of high stocks and over-production. Major company executives contend that such a condition exists because these refiners take crude oil and convert it into cheap gasoline. Refiners who are victims of this shortage claim they are not guilty, and some of the refiners who are hit by this shortage are not guilty of converting the oil into cut-price gasoline.

It is claimed that the major operators are purchasing up to 40,000 barrels of oil they do not need, to keep various refiners from getting it. These reports have been circulated and they have hurt curtailment's cause. There is no doubt that the major purchasing companies have been attempting to keep oil from refiners who sharply undersell them, but among these refiners are some who have been accused of unethical practices, and the major companies seem to have good reasons for purchasing all loose crude.

One or two large independent operators who have stopped deliveries to the larger purchasing companies, are selling their oil to independent refiners who are willing to pay a small premium for it. A premium for California crude does not seem justified under present conditions. Stocks are too high and production is too high; yet premiums are reported. Whether this has been caused by concentration and control of production is a question, but operators are generally aware of these developments and are easily offended where their interests are involved. The state has a potential above twice the amount it is producing; so it would seem that either a premium is not justified or the price of crude is out of line with its actual worth. Control of crude to



keep it out of the hands of unfair competition is justified; but the refiners who suffer from an illegitimate shortage are to be pitied.

The gasoline market has been weaker and another gasoline war is not impossible. The San Francisco market has broken badly and a weaker tendency is in evidence at Los Angeles.

New Orleans, La.—Wilson and Chapman are shipping two cars of Urbana, Arkansas, crude oil daily to their refinery here pending completion of a contemplated pipe line from the Urbana district to a point on the Ouachita River where barges are to transport the oil from Arkansas to New Orleans.

Refinery Runs Turn Upward; Average Totals 2,226,000 Barrels

The downward trend in refinery runs was interrupted last week when daily average throughput of all plants in the United States was increased about 18,000 barrels. Total daily average runs amounted to about 2,226,000 barrels, or almost 200,000 barrels a day more than is justified by current market requirements for refined products. As a result of the upturn in still

Crude Runs to Stills, Gasoline Stocks and Gas and Fuel Oil Stocks

Report for Week Ending January 16, 1932

(Figures in Barrels of 42 gallons each)

District—	Potential Capacity (Daily) Total	Reporting	Per Cent	Crude Runs to Stills Total	Daily Average	Per c't Operated	Gasoline Stocks (see note below)	Gas & Fuel Oil Stocks
East Coast	633,700	633,700	100.0	2,869,000	409,900	64.7	4,937,000	7,684,000
Appalachian	149,600	137,400	91.8	591,000	84,400	61.4	1,418,000	1,450,000
Ind., Ill., Ky.	436,300	431,500	98.9	1,851,000	264,400	61.3	4,789,000	5,235,000
Okla., Kans., Mo.	485,700	435,200	89.6	1,648,000	235,400	54.1	3,309,000	3,960,000
Texas	838,200	765,400	91.3	3,560,000	508,600	66.4	8,509,000	10,946,000
Louisiana-Arkansas	233,100	230,500	98.9	1,025,000	146,400	63.5	1,261,000	4,189,000
Rocky Mountains	160,900	143,800	89.4	302,000	43,200	30.0	1,854,000	748 000
California	914,500	888,100	97.1	3,028,000	432,600	48.7	*13,776,000	96,118,000
Total January 16	3,852,000	3,665,600	95.2	14,874,000	2,124,900	58.0	39,853,000	130,330,000
Total January 9	3,852,000	3,665,600	95.2	15,159,000	2,165,600	59.1	39,106,000	131,579,000
Total January 17, 1931	3,730,100	3,571,200	95.7	15,528,000	2,218,300	62.1	†39,171,000	133,728,000
The Texas and Louisiana Gulf Coastal figures shown below are included above in the totals of their respective districts.								
Texas Gulf Coast	532,500	531,500	99.8	2,825,000	403,600	75.9	6,754,000	8,204,000
Louisiana Gulf Coast	147,500	147,500	100.0	665,000	95,000	64.4	1,137,000	3,306,000

Note: In all the refining districts indicated except California, figures in this column represent gasoline stocks at refineries. In *California, they represent the total inventory of finished gasoline and engine distillate held by reporting companies wherever located within continental United States—(stocks at refineries, water terminals and all sales distributing stations, including products in transit thereto).

†Revised in Indiana-Illinois district, due to transfer to "Bulk Terminals" of stocks previously reported as "At Refineries."

HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH ALLOWABLE QUOTAS AND CURRENT DEMAND

State—	Allowable or Economic Limit	Indicated Current Demand	Daily Average Last Week	Added to or Withdrawn from Storage (Estimated)	Daily Average Since Jan. 1	Indicated Excess or Shortage Since Jan. 1 (Cumulative)
Arkansas	38,000[1]	43,000	34,300	—8,700	34,217	—202,000
California	456,000[2]	465,000	508,600	+43,600	507,035	+966,800
Kansas	90,000[1]	92,000	97,900	+5,900	99,741	+178,050
Louisiana	54,000[1]	63,000	57,500	—5,500	56,648	—146,100
Oklahoma	435,000[3]	435,000	411,700	—23,300	449,169	—34,100
Texas	818,000[1]	840,000	848,300	+8,300	843,626	+83,400
Balance of U. S.	202,000[1]	206,000	204,200	—1,800	207,324	+90,550
Total	2,093,000	2,144,000	2,161,500	+18,500	2,197,760	+936,600

[1]Economic limit based upon data compiled by The Oil Weekly.
[2]Allowable set by California proration committee.
[3]Allowable set by Oklahoma Corporation Commission.

runs, stocks of gasoline increased about 530,000 barrels, which was at a rate considerably greater than the increase reported for the preceding week. Figures of the American Petroleum Institute were revised to show that gasoline stocks for the week ending January 16 amounted to 39,208,000 barrels, indicating that the increase in stocks for that week only amounted to about 100,000 barrels. The gain last week emphasizes the folly of continuing to operate refinery stills at an excessive rate.

Still runs have been declining steadily since the week ending December 26, having dropped from a daily average of 2,387,000 barrels in the week ending December 19 to 2,208,000 barrels in the week ending January 16. Comparison of still runs by major refining districts for recent weeks shows that there has been a decline by refineries operating in the East Coast, Indiana-Illinois, Texas, Louisiana-Arkansas and California. On the other hand, runs were increased in the Appalachian district, Oklahoma-Kansas and Rocky Mountain area.

Gasoline stocks have shown a steady, almost uninterrupted, increase since the week ending October 10, 1931. At the former

Cracked Gasoline Production

Week Ending January 16, 1932

(Barrels of 42 gallons)

	Potential Charging Capacity			Production	
	Total	Daily Reporting	%	Total	Daily Average
East Coast	261,300	236,300	94.0	612,000	87,400
Appalachian	56,300	54,100	96.1	173,000	24,700
Ind., Ill., Ky.	330,400	315,400	95.5	479,000	68,400
Okla., Kans., Mo.	237,800	219,500	92.3	353,000	50,400
Texas	450,800	436,200	96.8	780,000	111,400
Louisiana-Arkansas	112,400	112,400	100.0	211,000	30,200
Rocky Mountain	99,900	98,400	98.5	77,000	11,000
California	190,800	190,800	100.0	349,000	49,900
Total Jan. 16	1,739,700	1,663,100	95.6	3,034,000	433,400
Total Jan. 9	1,739,700	1,663,100	95.6	3,098,000	442,600
Total Jan. 17, 1931	1,589,600	1,372,200	86.3	2,475,000	353,600
The Texas and Louisiana Gulf Coast figures shown below are included above in the totals of their respective districts.					
Texas Gulf Coast	352,400	347,400	98.6	643,000	91,900
La. Gulf Coast	77,000	77,000	100.0	153,000	21,900

Imports of Petroleum

(Barrels of 42 gallons)

	Week Ended Jan. 16	Week Ended Jan. 9
AT ATLANTIC COAST PORTS—		
Baltimore	*179,000	216,000
Boston	129,000	.....
New York	479,000	[1]532,000
Philadelphia	375,000	70,000
Others	126,000	[1]331,000
Total	1,288,000	1,149,000
Daily Average	184,000	164,142
AT GULF COAST PORTS—		
Galveston	.....	65,000
New Orleans and Baton Rouge	.....	115,000
Port Arthur and Sabine District	.....	.....
Tampa	46,000	.....
Total	46,000	180,000
Daily Average	6,571	25,715
AT ALL UNITED STATES PORTS—		
Total	1,334,000	1,329,000
Daily Average	190,571	189,857
Daily Average Four Weeks Ended	220,429	210,143
Distribution of Total Imports is as follows:		
Crude	538,000	527,000
Gasoline	294,000	435,000
Gas Oil	11,000	.....
Fuel Oil	491,000	[1]367,000
Total	1,334,000	1,329,000

[1] Revised.

* Of this total, 61,000 barrels of gasoline were imported in the Norwegian M/S "Ranja" from Constantza, Roumania, arriving January, 10, 1932.

California Oil Receipts

(Barrels of 42 gallons)

	Week Ended Jan. 16	Week Ended Jan. 9
AT ATLANTIC COAST PORTS—		
Baltimore	95,000	25,000
Boston	.....	.....
New York	.....	80,000
Philadelphia	.....	117,000
Others	.....	.....
Total	95,000	222,000
Daily Average	13,571	31,714
AT GULF COAST PORTS—		
Total	.....	.....
Daily Average	.....	.....
AT ATLANTIC AND GULF COAST PORTS—		
Total	95,000	222,000
Daily Average	13,571	31,714
Daily Average Four Weeks Ended	39,214	44,500
Distribution of Total California Oil Receipts is as follows:		
AT ATLANTIC COAST PORTS—		
Gasoline	.....	222,000
Gas Oil	95,000	.....
Total	95,000	222,000

United States Daily Average Production

1930	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
July	594,750	121,600	652,350	209,400	40,550	55,400	137,200	98,350	610,450	2,520,050	78,121,200
August	558,850	115,650	646,400	206,600	41,500	55,100	128,550	106,000	611,250	2,470,900	76,597,600
September	558,900	116,550	606,550	200,750	40,150	53,550	121,400	110,650	604,900	2,413,400	72,402,205
October	542,100	114,850	609,500	194,850	41,500	52,800	121,750	104,000	590,800	2,372,150	73,536,350
November	491,550	111,400	579,350	190,100	44,050	52,000	116,400	101,950	601,200	2,288,000	68,639,150
December	459,300	105,550	533,400	189,300	43,000	51,100	112,200	100,500	587,450	2,181,800	67,636,500
1931											
January	452,000	106,350	511,050	188,850	41,100	50,700	110,300	96,700	535,700	2,092,750	64,874,450
February	473,750	114,450	523,700	185,600	43,950	49,950	109,800	100,100	527 300	2,128,600	59,600,450
March	531,900	110,550	585,000	177,950	40,250	47,550	108,800	95,400	528,100	2,225,500	68,990,850
April	543,650	109,250	723,050	185,850	39,050	47,000	111,500	95,500	527,350	3,382,200	71,465,750
May	561,950	107,400	767,200	185,950	39,200	46,650	111,250	97,500	534,150	2,451,250	75,975,950
June	556,850	103,150	828,250	170,100	36,500	44,900	108,950	97,950	520,300	2,466,950	74,009,750
July	527,950	100,000	912,250	157,850	33,650	41,400	107,600	94,400	517,900	2,493,000	77,282,700
August	306,150	101,900	976,800	153,550	30,400	37,650	109,600	92,900	510,900	2,319,050	71,890,200
September	261,050	104,600	752,250	149,950	29,600	38,000	117,400	92,250	505,550	2,050,650	61,518,950
October	423,600	103,950	865,800	153,500	29,200	37,750	121,600	93,950	503,800	2,333,150	72,327,750
November	541,250	104,750	855,550	158,850	29,300	37,650	124,300	93,950	503,050	2,448,650	73,460,150
December	534,650	105,500	795,500	153,550	27,850	35,100	124,500	92,150	503,000	2,371,800	72,525,700
January 2	493,300	103,150	690,900	144,550	27,800	33,700	125,050	90,950	499,700	2,209,100	15,463,700
January 9	481,650	101,150	732,200	139,000	29,200	34,250	126,700	84,450	505,600	2,234,200	15,639,400
January 16	441,550	99,200	737,100	139,250	28,700	34,250	122,100	82,300	509,000	2,193,450	15,354,150
January 23	411,700	97,900	736,500	140,250	29,050	34,300	121,050	83,150	508,600	2,161,500	15,130,500
Increase	.....	.....	.....	1,000	350	50	.....	800	.....	.....	.....
Decrease	29,850	1,300	600	.....	.....	.....	1,050	.....	400	31,950	223,650

Last Week's Daily Average Production by Districts

TEXAS	Jan. 23	Jan. 16
Panhandle	52,850	49,200
North Texas	49,350	49,450
West Central Texas	25,950	25,600
West Texas	173,750	175,250
East Central Texas	49,750	51,150
East Texas	332,750	333,100
Southwest Texas	52,100	53,350
Texas Gulf Coast	111,800	111,350
TOTAL TEXAS	848,300	848,450
OKLAHOMA	411,700	441,450
CALIFORNIA	508,600	509,000
KANSAS	97,900	99,200

*Including Michigan.

LOUISIANA	Jan. 23	Jan. 16
North Louisiana	29,050	28,700
Louisiana Gulf Coast	28,450	27,900
TOTAL LOUISIANA	57,500	56,600
ARKANSAS	34,300	34,250
MOUNTAIN STATES		
Wyoming	36,650	34,550
Montana	5,850	5,700
Colorado	3,650	3,550
New Mexico	37,000	38,500
TOTAL MOUNTAIN STATES	83,150	82,300
*EASTERN STATES	121,050	122,100
TOTAL UNITED STATES	2,161,500	2,193,450

Summarized Review of Field Results

State—	Completions This week	Completions Last week	Oil Wells This week	Oil Wells Last week	Gas Wells This week	Gas Wells Last week	Failures This week	Failures Last week	Initial Prod. This week	Initial Prod. Last week
Arkansas	0	0	0	0	0	0	0	0	0	0
California	4	3	4	2	0	0	0	1	7,950	410
Illinois	0	1	0	0	0	0	0	1	0	0
Indiana	8	1	2	0	3	0	3	1	30	0
Kansas	8	12	5	6	0	2	3	4	3,285	4,285
Kentucky	6	2	2	1	2	0	2	1	175	5
Louisiana	2	15	1	6	1	1	0	8	20	2,880
Michigan	0	1	0	0	0	1	0	0	0	0
Mississippi	2	3	0	0	2	1	0	2	0	0
New Mexico	0	0	0	0	0	0	0	0	0	0
New York	11	11	9	11	1	0	1	0	56	72
Ohio	11	9	4	2	6	7	1	0	20	22
Oklahoma	20	14	8	7	3	2	9	5	14,435	33,480
Pennsylvania	28	32	21	22	1	4	6	6	46	108
Texas	124	116	93	106	3	0	28	10	616,477	741,313
West Virginia	3	11	2	3	1	8	0	0	41	17
Total	227	231	151	166	23	26	53	39	642,535	782,582
Increase	..	..	..	..	..	..	14	..	.....	.....
Decrease	3	..	5	..	3	..	..	..	140,047	.....

Comparison of Permits Granted for New Wells

	For Week Ending Jan. 23	Previous Week	This Week 1931	Total This Month 1931	This Month Total This Year	Total This Date Last Year	1931 Year Total
Arkansas	0	0	0	1	4	1	4	34
California	7	3	7	15	26	15	26	342
Louisiana	10	11	3	38	42	38	30	309
Kansas	5	8	15	40	54	40	38	475
Oklahoma	21	12	25	50	119	50	97	842
Texas	86	101	72	311	381	311	306	6,961
Total	129	135	122	455	626	455	501	8,963

date, gasoline stocks were reported at a total of 30,253,000 barrels. Last week the total amounted to 39,738,000 barrels. This represents a total gain in a period of but slightly over three months of 9,485,000 barrels. This increase in gasoline stocks is equivalent to the total increase reported during the year 1929, when stocks rose almost 10,000,000 barrels. The gain in gasoline stocks since January 1, alone, has amounted to nearly 2,500,000 barrels.

Oklahoma-Kansas Refiners Using Crude From Storage

Movement of crude oil out of storage became a reality in the Mid-Continent for the week ending January 23. The average daily withdrawal for the week was 14,900 barrels daily. It marked the first week of storage withdrawal since the period of martial law curtailment, which started in August last year and ended in October.

Further reduction in field output was the whole cause of taking this oil from storage. Oklahoma showed another decrease of 30,110 barrels daily. Production for the week was at the rate of 410,840 barrels daily. At Oklahoma City the output went down to 95,630 barrels daily, against 103,965 for the previous week. The Greater Seminole area was brought down to 132,000 barrels daily, against 148,000 barrels for the week previous.

In Kansas, where substantial production has never been established there was another slight drop in output, 97,535 barrels being the daily figure against 98,890 barrels.

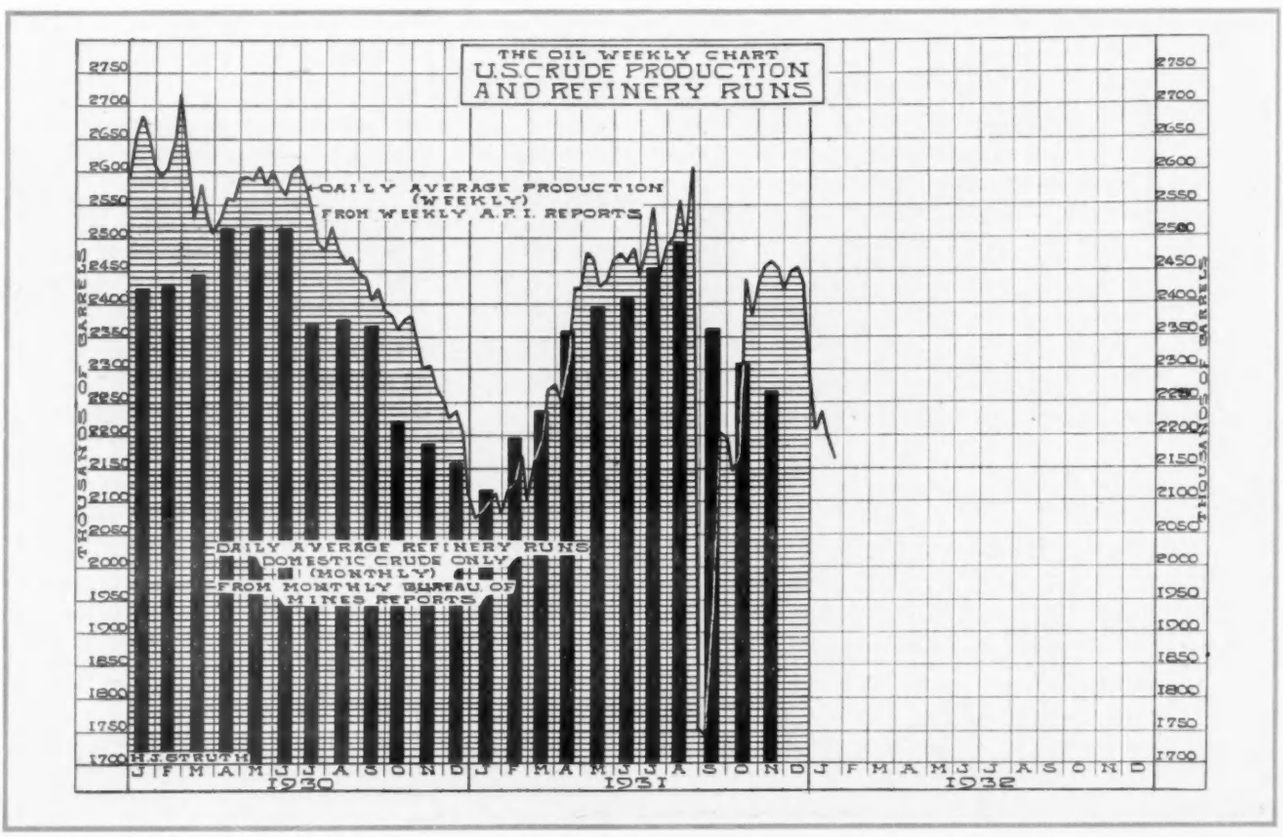
This status of affairs has its cause in an evident determination of purchasers to reduce storage. Producers are in a fretful state, especially at Oklahoma City, where nominations of purchasers have been reduced consistently since December, when the output was well above 100,000 barrels daily. In the Seminole area also, purchasers are taking less and less oil from wells, while oil in storage is being used for current refinery operations as well as shipments to refining centers in both the Middle West and the Atlantic Coast.

Refiners continue to hold to a policy of running only sufficient crude oil to furnish materials for current needs. Several of the integrated concerns with headquarters in the Mid-Continent are buying part of their gasoline requirements from the smaller

Tulsa.—Recommendations were made Tuesday that the Oklahoma City pool be restricted to a daily output of 95,000 barrels. The recommendation was made by W. N. Stokes, chairman of the committee of umpires. Strenuous objection was raised by B. G. Patton, member of the committee, who flayed many of the orders of the corporation commission, which held the hearing.

The commission took no action but gave all parties to the controversy 24 hours within which they can file any other recommendations.

Present allowable of the field is 125,000 barrels, which represents a 45,000-barrel decrease from the figure which had been set for the fourth quarter of last year. Now the proposal is that another 25,000 barrels be taken away. Reasons advanced were that buyers are not taking the allowable and that a reduction is the only solution.


THE OIL WEEKLY CHART
U.S. CRUDE PRODUCTION AND REFINERY RUNS
DAILY AVERAGE PRODUCTION (WEEKLY) FROM WEEKLY A.P.I. REPORTS
DAILY AVERAGE REFINERY RUNS DOMESTIC CRUDE ONLY (MONTHLY) FROM MONTHLY BUREAU OF MINES REPORTS
THOUSANDS OF BARRELS
H.J. STRUTH
1930
1931
1932

refining concerns. This applies in particular to the third grade gasolines, which are sold at prices below the regular grade.

This background of reduced field output and restricted refinery output has served to hold prices of finished products at an even keel. Early this week no U. S. motor gasoline was moving at less than three cents a gallon, while some sales were being made an eighth and a quarter of a cent higher.

Reasons for the determined effort to reduce storage may involve one or all three of the following:

A preference to use crude oil previously bought in order to conserve cash.

An operating policy that will assure a crude oil price schedule at least no lower than the present.

Or a belief that storage can be filled later with crude oil prices lower than those prevailing today.

Curtailed field output, controlled refinery operation and withdrawal of storage oil present a satisfactory picture, except in the eyes of the producer. In Oklahoma especially producers are forced to accept diminishing money totals for oil. In Oklahoma City, for instance, the hope of producers when martial law was removed last fall was that the output would remain around 165,000 barrels daily. Now purchasers are taking but little more than half of that amount. Seminole has not been so adversely affected while the settled production is drawing about as much money as formerly.

Major Companies Stabilize Market Through Co-operation

Fort Worth, Texas—Stabilization of the crude market in the East Texas field has been brought about within the past week by the larger companies co-operating in taking care of the large number of unconnected wells, according to Charles F. Roeser, Fort Worth operator, who is a director and chairman of the production division of the American Petroleum Institute and also president of the Texas Oil & Gas Conservation Association. He attended the special meeting at New York of the directors of the former organization, and returned home via the East Texas field in order to ascertain if prompt attention was being given operators in need of market relief.

Leading purchasers have agreed to absorb new connections on all necessary wells drilled by operators, but some difficulty may be experienced in getting market relief by lease owners that persist in drilling inside locations not affected by drainage. Roeser warns the operators against the practice of drilling this class of locations. He stated that the crude buyers are trying to meet the situation, and that if the lease owners co-operate in restricting drilling to compulsory locations, conditions will be much better within 60 days.

Coleman County Wells Given Market Outlet by Humble

Fort Worth, Texas.—Market relief for 185 shallow oil wells located in northeastern Coleman County has been provided by Humble Oil & Refining Company. These wells have a combined output of about 500 barrels daily and have been idle since January 1, 1931, when Prairie Oil & Gas Company ceased functioning as a crude purchaser in Central West Texas district. Owners of these wells tried in vain to induce other purchasers in the district to give connections during the past year.

In addition to giving aid to the above group, Humble Oil & Refining Company has permitted operators in the Cook Ranch shallow field, Shackleford County, to produce a maximum of 10 barrels per well daily instead of a four-barrel limit. This will boost the output of the field to about 2500 barrels daily.

Posting of a price cut of 25 cents per barrel below the market quotation of major companies in the Panhandle district by Bell Oil & Gas Company, effective January 17, has been followed by a breaking off of connections by a number of operators who have located market relief through other buyers. The above company has been handling about 4000 barrels daily, including the output of properties held by Danciger Oil & Refining Company, which accounts for more than half of the runs. The bulk of the oil is diverted to the Pampa refinery of the Petroleum Refractionating Corporation, which is owned by Danciger Oil & Refining Company.

Stanolind Crude Oil Purchasing Company has returned about 900 barrels of daily runs in Wilbarger County to The Texas Company after having relieved the latter of this oil several months ago as a special favor. This will cause The Texas Company to increase its oil runs to storage.

Independents Offer Congress $100,000,000 Oil Tariff Bill

Washington, D. C.—A plan whereby the government could secure more than $100,000,000 toward the amount it is seeking to raise by taxation while at the same time the domestic oil industry could secure a large measure of the protection it is seeking against imports was submitted to the house ways and means committee January 27 by representatives of the independent producers.

The oil men urged upon the committee the advisability of imposing an excise tax of two cents per gallon on all crude and fuel oil imported and four cents per gallon on gasoline and motor oil, and suggested the possibilities of a tax of four cents a gallon on domestic lubricating oil. The potential revenue from these sources, it was said, is about $106,000,000 a year.

A two-cent tax on crude and a four-cent tax on refined products would, in effect, give the industry a tariff of 84 cents a barrel on the former and $1.68 on the latter. It is believed that if the committee were to incorporate these taxes in the bill which is soon to be reported to the house, agitation for a tariff would be halted until a more propitious time. It is believed house leaders will be very reluctant to bring up any tariff legislation dealing with rates this session, in the fear that, once introduced, tariff revision on a large scale would be demanded.

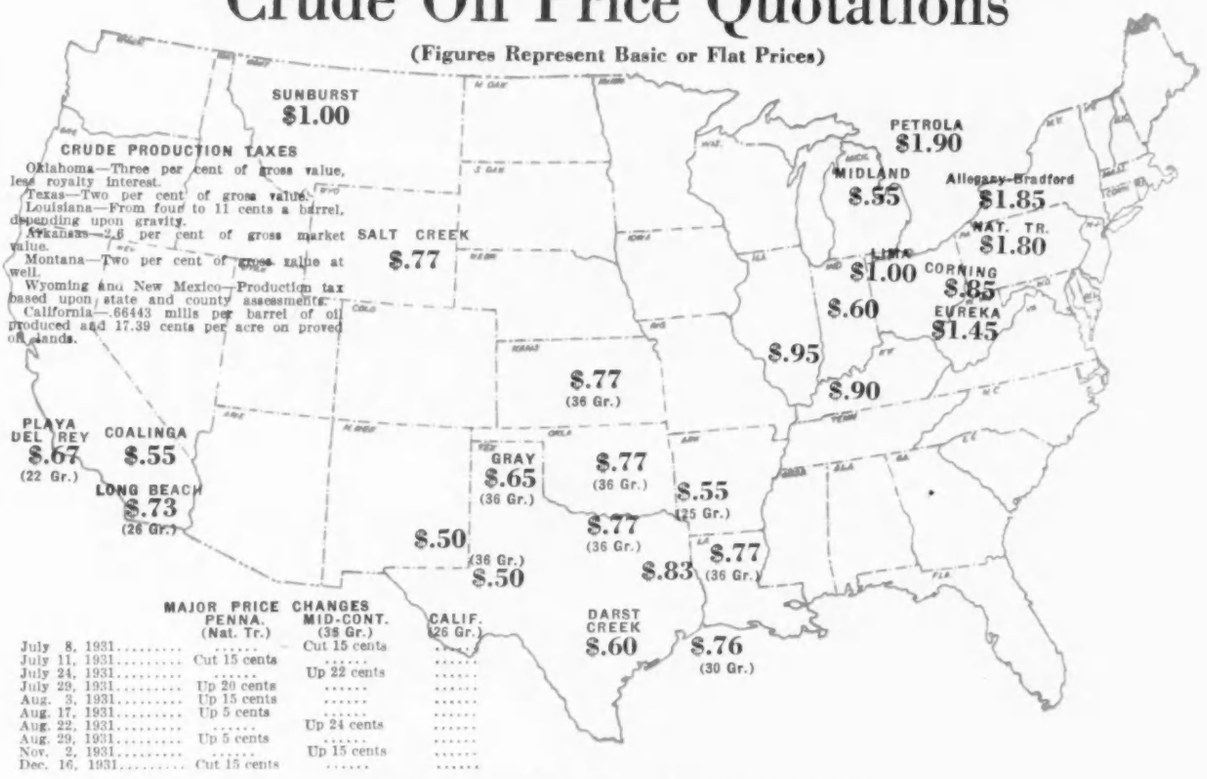
The plea for an oil tariff was submitted by Wirt Franklin, president of the Independent Petroleum Association, and following his presentation it was agreed that a special hearing would be held February 2 for further consideration of the matter.

Proponents of the oil tax have been attempting to get officially from the administration the attitude which will be adopted, but without success, although the president is privately represented as not being opposed to the move.

As the committee's hearings drew to a close there were indications that the entire bill proposed by the administration would be rejected and a measure prepared under which the entire additional revenue would be derived from stock transfer taxes, and levies upon the consumption of electricity and gas, and upon telephones. If this fails to raise sufficient revenue it is possible a tax will be imposed upon automobiles and possibly upon gasoline consumed.

Crude Oil Price Quotations

(Figures Represent Basic or Flat Prices)



MAJOR PRICE CHANGES

	PENNA. (Nat. Tr.)	MID-CONT. (38 Gr.)	CALIF. (26 Gr.)
July 8, 1931	.....	Cut 15 cents	.....
July 11, 1931	Cut 15 cents	.....	.....
July 24, 1931	.....	Up 22 cents	.....
July 29, 1931	Up 20 cents	.....	.....
Aug. 3, 1931	Up 15 cents	.....	.....
Aug. 17, 1931	Up 5 cents	.....	.....
Aug. 22, 1931	.....	Up 24 cents	.....
Aug. 29, 1931	Up 5 cents	.....	.....
Nov. 2, 1931	.....	Up 15 cents	.....
Dec. 16, 1931	Cut 15 cents	.....	.....

Official Postings and Differentials

(Revised to January 26, 1932)

California: (Effective June 19, 1931.)

Signal Hill, Seal Beach and Alamitos Heights: 14 to 22.9 gravity 65 cents; 23 gravity 67 cents with differential to two cents for each degree upward. Top price for Signal Hill, 30 gravity, 81 certs; top price Seal Beach and Alamitos Heights, 27 gravity, 75 cents.

Huntington Beach: 14 to 21 gravity, 65 cents; 22 gravity, 66 cents with differential of two cents for each degree upward. Top price, 27 gravity, 76 cents.

Inglewood: 14 to 19.9 gravity 65 cents; 20 gravity 66 cents with differential of two cents for each degree upward. Top price, 25 gravity 76 cents.

Playa Del Rey: 19 to 20.9 gravity 65 cents with differential of one cent for each degree upward. Top price, 25 gravity, 70 cents.

Olinda and Brea Canyon: 14 to 19.9 gravity 65 cents; 20 gravity 66 cents; 21 gravity 67 cents; 22 gravity 68 cents with differential of two cents for each degree upward. Top price, 28 gravity, 80 cents.

Coyote Hills: 14 to 22.9 gravity 65 cents; 20 gravity 66 cents; 21 gravity 67 cents with differential of two cents for each degree upward. Top price, 28 gravity, 79 cents.

Santa Fe Springs: 24 to 26.9 gravity 65 cents; 27 gravity 68 cents; 28 gravity 71 cents; 29 gravity 73 cents; 30 gravity 75 cents; 31 gravity 78 cents; 32 gravity 80 cents; 33 gravity 83 cents; 34 gravity 85 cents; 35 gravity and above 87 cents.

Whittier, La Habra and Montebello: 65 cents a barrel.

Torrance: 14 to 21.9 gravity 65 cents with differential of one cent for each degree to 25 gravity and two-cent differential for 25 gravity. Top price, 25 gravity, 70 cents.

Richfield: 14 to 20.9 gravity 65 cents; 21 gravity 66 cents with differential of two cents for each degree upward. Top price, 25 gravity, 74 cents.

Elwood: 33 gravity 79 cents; 34 gravity 81 cents with differential of three cents for each degree upward. Top price, 36 gravity, 87 cents.

Newhall, McKittrick and Kern River: 55 cents a barrel.

Midway-Sunset, Elk Hills and Buena Vista Hills: 14 to 21.9 gravity 55 cents; 22 gravity 56 cents; 23 gravity 58 cents; 24 gravity 61 cents; 25 gravity 64 cents; 26 gravity 66 cents; 27 gravity 68 cents; 28 gravity 71 cents; 29 gravity 74 cents; 30 gravity 76 cents.

Lost Hills: 14 to 20.9 gravity 55 cents; 21 gravity 57 cents; 22 gravity 59 cents; 23 gravity 60 cents; 24 gravity 62 cents; 25 gravity 64 cents; 26 gravity 66 cents; 27 gravity 67 cents; 28 gravity 69 cents; 29 gravity 71 cents; 30 gravity 72 cents.

Coalinga: 14 to 24.9 gravity 55 cents; 25 gravity 57 cents.

Wheeler Ridge: 55 cents a barrel.

Athens, Dominguez and Rosecrans: 24 to 24.9 gravity 69 cents with differential of two cents for each degree upward. Top price, 34 gravity, 89 cents a barrel.

Oklahoma, Kansas, North Texas (Effective January 8, 1932). Below 29 gravity; 61 cents, with differential of 2 cents for each degree to 40 gravity and above which is posted at 85 cents.

Texas Panhandle: (Effective November 2, 1931)

Gray County: Below 35 gravity: 61 cents, with differential of 2 cents for each degree to 40 gravity and above which is posted at 73 cents.

Carson and Hutchinson Counties: Below 35 gravity; 56 cents with differential of 2 cents for each degree to 40 gravity and above which is posted at 68 cents.

West Texas: (Effective November 2, 1931).

Crane-Upton, Crockett, Ector, Howard-Glasscock, Pecos and Winkler Counties, Texas and Lea County, New Mexico: 50 cents a barrel.

Southwest Texas: (Effective November 2, 1931)

Refugio: Heavy: 75 cents.

Refugio: Light: (Same as Gulf Coast—see below).

Gulf Coast: (Effective November 2, 1931)

Goose Creek, Hull, Liberty, Orange, Pierce Junction, Mykawa, Moss Bluff, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugarland, West Columbia, Humble and Refugio Light: Below 25 gravity: 70 cents, with diiferential of 1 cent for each degree to 40 and above which is posted at 86 cents.

Mirando: 75 cents; **Salt Flat:** 60 cents; **Darst Creek:** 60 cents; **Pettus:** 85 cents; **Markham:** 67 cents.

East Texas (Effective November 2, 1931)
Flat Price 83 cents.

North Louisiana and Arkansas: (Effective Nov. 4, 1931)
Caddo, Homer, Haynesville, Bull Bayou, Sabine, Cricton, De-Soto, El Dorado, Cotton Valley, Sarepta, Cartersville: Below 25 gravity 53 cents with differential of 2 cents for each degree beginning with 25 gravity and ending with 40 and above. Top price 85 cents a barrel.

Smackover: 55 cents.

Rocky Mountain States: (Effective Nov. 3, 1931)
Salt Creek: Below 29 gravity 61 cents; 29-29.9 gravity 63 cents, with differential of 2 cents each degree to 40 and above. Top price 85 cents.

Elk Basin and Grass Creek: $1.05; **Big Muddy:** 83 cents; **Lance Lance Creek** $1.05; **Rock Creek:** 85 cents; **Sunburst:** $1.00; **Osage:** 98 cents; **Cat Creek:** $1.05 cents; **Pondera:** 90 cents; **Hogback, New Mexico:** 80 cents.

Eastern States: (Effective November 3, 1931)
Lima: $1.00; **Indiana:** 60 cents; **Illinois:** 95 cents; **Princeton** 95 cents; **Wooster:** $1.15; **Western Kentucky:** 90 cents.

Pennsylvania: (Effective December 16, 1931)
Bradford District: $1.85; **National Transit Oil:** $1.80; **Southwest Pennsylvania Pipe Line Oil:** $1.55; **Eureka Pipe Line Oil:** $1.45; **Buckeye Pipe Line Oil:** $1.25; **Corning Crude:** 80 cents.

Michigan: (Effective Oct. 9, 1931). **Midland:** 55 cents a barrel. **Muskegon:** Same posting as Mid-Continent; 61 cents to 85 cents a barrel.

Canada: (Effective Nov. 3, 1931).
Petrolia: $1.90; Oil Springs: $1.97.

GULF

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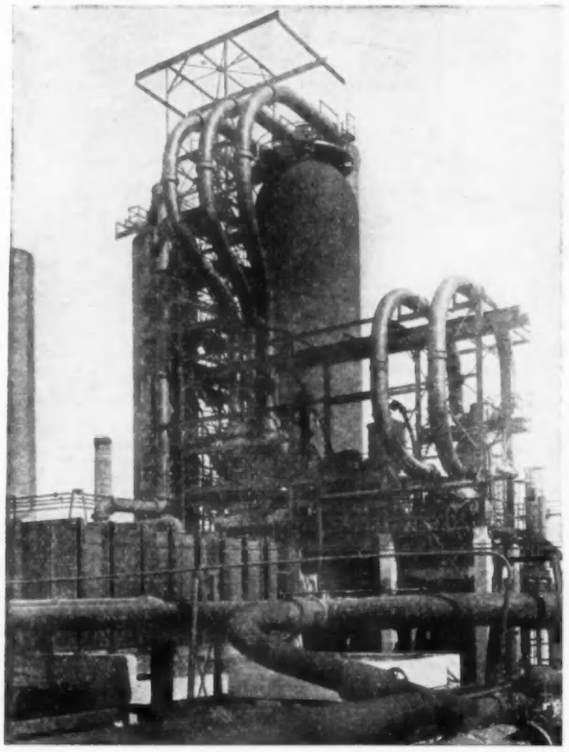

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GULF REFINING COMPANY

General Sales Offices: PITTSBURGH, PA.

Important New Discoveries During 1931

KANSAS

Field— Discovery well and location	Date completed	Producing horizon	Total depth	Initial Product on (barrels daily)	Remarks
Stoltenberg—Gypsy & Tom Palmer's Stoltenberg 1, c-sw 22-16s-10w	6-27-31	3332-3348	3348	1200 bbls, estimated.	Oil from Arbuckle, swbd 106 bbls 1 hr.
Stratman—Aylward et al's Stratman 1, se nw se 1-17s-10w	4-15-31	3255-3271	3271	Est. 2000 bbls.	Pumped 2300 bbls from Arbuckle (?)
Canton Dist. of Ritz-Decker-Garrett Field—Darby & Shell's Kaegi 1, ne ne ne 20-19s-1w	2-11-31	2935-2955	2955	16,000,000 cu. ft. gas.	
(Not Named)—Muth Bros.' Beyers 1, nec nw 21-19s-9w	2- 7-31	3213-3244	3244	Est. 375 bbls.	
(Not Named)—Cress et al's (Hinkle) Sharpe 1, sec ne 13-20s-10w	4-22-31	3333-3339	3339	Est. 2000 bbls from Arbuckle.	
(Not Named)—Skelly Oil Co.'s Miles 1, nec 30-27s-10w	1-17-31	3385-3441	3441	450 bbls.	K. C. L. (?)
(Not Named)—Hollow's Fee 1, sw sw ne 20-22s-3w	12-20-31	3507-3517	3517	Est. 200 bbls.	First Hunton formation prod. in Kansas.
(Not Named)—Chas. Hilligos et al's Isern 1, sw se ne 12-20-11w	11-10-31	3314-3328	3328	840 bbls.	From Arbuckle; swab 210 bbls 6 hrs.
(Not Named)—Derby's Eastborough 2, se sw ne 19-27s-2e	11- -31	3230-3246	3246	500 bbls.	From Misener

OKLAHOMA

(Not Named)—Pierce & Turnam's Phillips 1, sw sw se 8-9n-6e	4- -31	4228-4251	4245	255 bbls.	From Wilcox.
(Not Named)—Standlind's Jones 2, sw se nw 20-9n-6e	11-16-31	2770-2795?	2800	2596 bbls.	Old Wilcox well plugged back (to Wewoka); cas ripd 2770-2785.

CALIFORNIA

Dudley Ridge—Kettleman-Lakeview Oil and Gas Co.'s 1, sec. 11-23-19	1- 2-31	.....	1285	25,000,000 cu. ft gas.	Gas-sand.
Gato Ridge—Barnsdall Oil Co. and Rio Grande Oil Co.'s Tognazzini 1, Sec. 9-8-32	6-26-31	.....	2510	1000.	Prod. from shale.
San Miguelito—Continental Oil Co.'s Grubb 1, Sec. 23-3-24	11-16-31	.....	6750	650.	From Pliocene.
Middle Dome Kettleman Hills—Petroleum Securities Co.'s Burbank 1, Sec. 30-23-19	12-13-31	.....	9208	1200.	From Tembler zone.

WYOMING

PARKER COUNTY—					
Badger Basin—Resolute Oil Corp.'s Northern Pacific 1, Sec. 17-57n-101w	8-13-31	8250-8725	8725	260 bbls oil from second Frontier sand; 50° grav. crude; field is 12 mi se Elk Basin.	

NORTH TEXAS

ARCHER COUNTY—					
(Not Named)—Deep Oil Dev. Co. et al's L. F. Wilson 1, 330 ft from sw c Sec. 76, A.T.N.C. Sur.	3-22-31	2216-2224	2224	720	
(Not Named)—T. F. Hunter Oil Corp.'s Wagner-Duck-Worth 1-B, 1670 ft from n and 1250 ft from w line Sec. 7, Harris Sub-Div.	2-10-31	1391-1396	1396	35	
COOKE COUNTY—					
(Not Named)—J. G. Rowe Drl. Co. (was Humble's C. C. Clayton 1 E, Reed Sur, Abst 849	4- 1-31	1012-1043	1644	40	
JACK COUNTY—					
(Not Named)—Brazos River Gas Co.'s D. C. Clayton-Gulf 1, Jas. Young Sur., Abst. 916	3-17-31	2894-2942	2942	3¼ mil ft gas and 250 bbls oil.	
WICHITA COUNTY—					
(Not Named)—Deep Oil Dev. Co.'s Munger 1, 330 ft from nwc Blk. 30, K.W.F.L. Sur	7- 8-31	3675-3942	5430	150	
YOUNG COUNTY—					
(Not Named)—Dewey M. Knox et al's Brashear-Burkett 1, sec of Lot 9, Sec. 3412, T.E.&L. Sur.	5-15-31	2695-2713	2727	80	
(Not Named)—E. C. Reed et al's E. P. Tatum 1, nec Sec. 1908, T.E.&L. Sur.	3-10-31	651- 662	662	50	

WEST TEXAS

CRANE COUNTY—					
(Not Named)—Cranfill Bros. Oil Co.-Gulf Prod. Co.'s J. B. Tubb 1, 2310 ft from n and 330 ft from e lines Sec. 8, Blk. B-27, P.S.L.	6-11-31	4302-4310	5336	110	
FISHER COUNTY—					
(Not Named)—Cranfill-Reynolds Co.'s Bledsoe-Flannigan 2, 330 ft from sec of w½ Sec. 200, B.B.B. & C. Ry. Sur.	5-10-31	3782-3800	3800	65	
LOVING COUNTY—					
(Not Named)—Lewis & Slagel Drl. Co.'s Henderson Cartwright 1, 2310 ft n and 990 ft e of sw cor, Sec. 1, Blk. 57, Tsp. 1, T&P Ry. Sur.	7-26-31	3175-3180	3182	35	
WARD COUNTY—					
(Not Named)—Shipley Oil Corp. D. H. Byrd & H. A. Harmon's Lee Monroe 1-A, 220 ft from nw and sw lines, Sec. 3, Blk. 1, W&NW Ry. Sur.	11-21-31	4663-4666	4666	100	

CENTRAL EAST TEXAS

UPSHUR COUNTY—					
(Not Named)—Cranfill-Reynolds Co.-L. Russ, Harry Reynolds & W. P. Luse's M. L. Rash 1, 1610 ft from w and 330 ft from s lines 106-ac lease E. N. Eubanks Sur.	11-15-31	3710-3728	3728	(Filled 2300 ft O. I. H. on D.S.T.	

TEXAS GULF COAST

BRAZORIA COUNTY—					
Manvel—The Texas Co.'s Belcher 1, H. N. Little Sur.	9- 9-31	5465-5481	5481	2000	28° Grav. Oil
FORT BEND COUNTY—					
Rabb Ridge (or Thompson or Clear Lake)—Cullen & West's Lockwood 1, 1275 ft s of n l and 475 ft e of w l of e½ of Jno. Rabb Sur.	5-20-31	3059-3089	3089	410	Flowed 410 bbls 24.5° Grav. oil 1st 24 hrs ¼-in choke. Other oil now at 3600, 3900, 5200 and 6400 ft.

SOUTH TEXAS

Field— Discovery well and location	Date completed	Producing horizon	Total depth	Initial Production (barrels daily)	Remarks
BASTROP COUNTY—					
Yoast Extension—Texas Pet. Co.'s (Schimmel & Batts) Williams 1, 2200 ft from se cor and 150 ft ne line tr in Jas. Doyle Sur, 6 mi n Lytton Springs, 2½ mi sw Yoast pool	5-15-31	1384-1977	1977	6 bbls.	Top of first Serpentine 1384.
BEE COUNTY—					
Damac Pool—J. M. Davis et al's (later Damac Oil Corp.'s) Geo. A. Ray 1, 330 ft from n and e lines Jno. A. Williamson Sur, 38-ac tr, 1 mi sw Pettus townsite	7-18-31	3920-3925	3925	380 bbls.	On ¼-in choke.
CALDWELL COUNTY—					
(Not named) J. E. Mills et al's McMahon 1, 120 ft from WL and 270 ft from NL 50-ac tr, Pinchback sur, 6 mi se Lockhart	4- 9-31	959- 963	976	8 mil ft gas.	
(Not named) M. O. Rayor's Dunlop 1, 150 ft from NW and NE lines of tr in Solomon Scar sur, 2½ mi NE Luling	7-15-31	....-2480	2515	Pump 30 bbls.	Top chalk 2092; top Del Rio 2325; top Edwards 2511; td 2515; plug back 2480 in Buda.
GOLIAD COUNTY—					
(Not named) Stanolind O&G Co.'s & Jno. F. Camp & Neuhaus Drlg. Co.'s Pettus 1, 4750 ft N and 28° 20 min. W of extreme SE cor of 3418-ac tr in Maria de Jesus Ybarbo sur	8- 8-31	4282-4286	4286	15 bbls oil; 8 mil cu. ft gas; 30 bbls salt water;	plugged and abn. Originally abn 3853 by So. Crude O. Pur. Co.; Deepened, td 4308; plugged back, new td 4286.
GUADALUPE COUNTY—					
Darst Creek Extension. Jno. F. Camp's Sue E. Denman 1, 450 ft N highway, 150 ft EL, 50-ac tr, Wm. Arrington sur, 5500 ft SW Darst Creek field	8-29-31	2495-2507	2507	6072 bbls.	From Edwards lime.
JIM WELLS COUNTY—					
(Not named) Carsil O&G Co.'s McGill 1, 1665 ft from WL and 754 ft SL Wm. D. Baldwin sur, 3 mi n Aramagosa	3-30-31	2683-2689	2689	Est. 60 mil cu. ft. gas.	Blew in wild; controlled; plugged and abn.
LIVE OAK COUNTY—					
Mount Lucas Field deep sand. Houston Oil Co.'s Booth 1-A, 3600 ft NE Mt. Lucas gas prod., 2800 ft ne along SL of tr from Nueces River, thence 330 ft NW at rt angles in M. B. Kivlin sur.	2- 1-31	5270-5277	5277	63 bbls.	New sand.
Mount Lucas Field new sand. Houston Oil Co.'s Cartwright 23, 691 ft N 30° E. Cartwright 11	7-23-31	3554-3565	3565	100 bbls.	New sand.
NUECES COUNTY—					
Saxet Field new sand. Saxet O&G Co.'s Dunn 7, 2400 ft from Nw c and 200 ft from NE cor of tr.	41..-31	....-4296	4296	90 bbls oil and 30 mil ft gas.	New sand.
Saxet Field new sand. Houston Oil Co.'s Harrell 2, se cor Jno. E. Dunn sur 312	5-19-31	2725-2740	2740	Gas.	Blew in wild; controlled and deepened to regular horizon.
Saxet Field new sand. L. L. Smith, Inc.'s, H. B. Hunter 1, 150 ft from s and w lines H. B. Shepherd sur, Rincon del Osa Grant	7- 6-31	....-3370	3370	25 mil. cu. ft gas.	Drilled to 3388; plug to 3370; 3250 lbs. pressure.
Saxet Field new sand. Gulf Coast Oil Co.'s Maggie Harrell 1, 330 ft from s and w lines of tr, Blk. 32, Sec. 311, GC&SF sur.	9-..-31	4553- 4562	4562	185 bbls.	Drilled to 5225 ft; plugged to 4562; new sand.
(Not named) Stanolind O&G Co.'s Chas. E. Stratton 1, 1650 ft EL, 330 ft SL Sec. 12, Stratton Farm subdiv., P. Anchow sur, 6 mi s Agua Dulce	12-18-31	4788-4801	....	Est. 4 mil cu. ft gas.	550 lbs. pressure; 5-inch choke.
REFUGIO COUNTY—					
(Not named) Humble O&R Co.'s D. M. O'Connor Heirs 1, 12,625 ft SL and 7225 ft EL Jno. Keuthing sur, 1 mi from S. A. River and Victoria County line, 20 mi ne Refugio	12- 1-31	4127-4155	4155	750 bbls.	On 11/32-inch choke; 300 lbs. pres. on tubg. 1500 on csg; 8% salt water.
SAN PATRICIO COUNTY—					
(Not named) Aransas Oil Co.'s Welder 1, 390 ft from WL, 5167 ft SL 500-ac tr, E. Portilla sur, 500 ft Ne Union's Welder 3, 5 mi ne Sinton	4-30-31	3653-3663	3698	35 mil cu. ft gas.	At 3698 showed salt water; plugged to 3663. Est. 35 mil gas ¼-inch choke; 1600 pres.
VICTORIA COUNTY—					
(Not named). The Texas Co.'s McFadden 2, 9150 ft s and 200 ft e at rt angles from Nw cor of C. M. B. Hoyd sur, 4 mi w Lion area, McFadden field	2-16-31	2005-2025	2025	40 mil cu. ft gas.	Blew in wild; controlled and comp. as gas well.
(Not named). T. B. Slick Estate's McFadden 1, 1700 ft ne along SE L. from S cor of sur, thence 5050 ft Nw at rt angles, J. Barrian sur, 8000-ac blk, 3 mi n Lion area	7-22-31	3502-3509	3509	40 mil. cu. ft gas.	1700 lbs. pressure on ¼-in choke; drilled to 3512; plugged back.
(Not named). The Texas Co.'s McFadden 3, S 15°W 6200 ft and N 75°W 1850 ft out of NE cor Jno. M. Rine sur, 2675 ft N and 30°W McFadden 2	1 1-32	5828-5832	5832	750 bbls.	On 5/8-in. choke; tubg-cas pres: 1250 and 1075.
ZAPATA COUNTY—					
(Not named). Nordan & Morris' (Bateman) Jose Bustamante 1, 750 ft NE L. 200 ft NW L., Share 35, Fansler Partition, Comitas Grant, Se side Escobas pool	4-29-31	1485-1491	1491	475 bbls.	On ¼-in. choke, 2-in. tubg.

LOUISIANA GULF COAST

CALCASIEU PARISH—					
Iowa. Vacuum Oil Co.'s Bert T. Waite 1, 225 ft n and 225 ft w of SE SE Sec. 12-9s-7w, and 2½ mi nw Iowa	1-30-31	5001-5008	5008	300 bbls.	On 3/8-in. choke; 28.4° Gr. oil.
CAMERON PARISH—					
Cameron Meadows. Vacuum Oil Co.'s Cameron Meadows Land Co. 2, 1900 ft w and 3120 ft s of NE cor Sec. 21-14s-13w, (500 ft s No. 1)	10-11-31	5250-5270	5270	1000 bbls.	On 3/8-in. choke; 41° Gr. oil. No. 1 test was comp. 1-20-31 as ½ million ft gas well.
IBERVILLE PARISH—					
Bayou Choctau. Standard of La. & Gulf Ref. Co.'s Gay 1, 2500 ft n and 100 ft e of SW cor E½ Sec. 32-9s-11e	6-20-31	4340-4353	4353	3000 bbls.	On 3/8-in. choke; 29.5° Gr. oil.
LA FOURCHE PARISH—					
Leesville (or Bayou La Fourche). The Texas Co.'s La. Ld. & Explo. Co-Leesville 2, 4396 ft s and 705 ft e of NW cor Sec. 26-21s-22e	2-16-31	3003-3046	3046	480 bbls.	On 3/8-in. choke; 20° Gr. oil. Later deepened: 1500 bbls 25° Gr. oil daily at 3598-3626 ft.
PLAQUEMINE PARISH—					
Lake Grande Ecaille (or Lake Washington). Humble O&R Co.'s Cockrell-Moran 4, 2790 ft w and 8070 ft n of NE cor of T 20s- R 26e	6-20-31	1145-1158	1158	500 bbls.	On 3/8-in. choke; 18° Gr. oil from cap rock.

Atlantic Buys Cranfill-Reynolds East Texas Leases for $3,000,000

Houston.—Signing of a contract January 25, practically assured sale by Cranfill-Reynolds Company, Houston, of approximately 1400 acres of proven leases and 13 completed wells in the East Texas field to Atlantic Oil Producing Company, Dallas, for $3,000,000 in cash, including a large immediate payment and the remainder in deferred cash notes. While the deal was regarded following signing of the contract as virtually consummated its effectiveness was made subject to approval of the board of directors of Cranfill-Reynolds Company, which was scheduled to meet in Houston Thursday, January 28. The sale being also subject to examination of titles by Atlantic Oil Producing Company, the seller agreed to submit abstract data within seven days.

Belief that the transaction would be carried through to completion was based upon the fact that a considerable percentage of directors of Cranfill-Reynolds Company had individually expressed approval of it. The board of directors includes nine members, as follows: George S. Heyer, Harry Reynolds, W. L. Goldston, Jr., and Palmer Bradley, all of Houston; Tom E. Cranfill, Dallas; Henry Richardson, San Antonio; W. L. Moody III, Galveston; O. R. Seagraves, New York; and J. Edgar Pew, Philadelphia. The board has recently been functioning without a chairman, although Seagraves formerly served in that capacity. Officers of the company include Heyer and Reynolds as president and vice-president, respectively, and Frank Trevitt, Houston, secretary.

Although the above deal involves a considerable portion of Cranfill-Reynolds Company's properties in the East Texas field, the company will still retain substantial holdings there, including about 400 acres of proven leases; 11 producing wells; all interest in the promising wildcat, Rash 1, and surrounding lease block in the Jamestown district of Upshur County, north of the East Texas field proper, as well as several other valuable wildcat blocks in that general region; five 55,000-barrel steel tanks and two smaller tanks on a tank farm near Longview; and the extensive pipe line gathering system and tank car loading facilities which were built in the East Texas field during its early development, including over 40 miles of eight-inch, six-inch, and four-inch pipe, extending from wells of the company in the Kilgore and Lathrop districts to the tank farm and thence to the large loading rack of the company on the Santa Fe Railroad at Longview.

The properties which Atlantic Oil Producing Company is scheduled to acquire in the transaction are located for the most part in Gregg County immediately south of the Sabine River, with several small leases farther south in Rusk County also included. These properties are adjacent to leases which the Atlantic interests acquired last summer from Cranfill-Reynolds Company. That former deal involved 1047 acres of leases and one producing well and a total consideration of $1,500,000.

Atlantic Refining Company through its producing and pipe line subsidiaries, Atlantic Oil Producing Company and Atlantic Pipe Line Company, will be in a particularly commanding position in the East Texas field upon acquisition of the additional Cranfill-Reynolds Company properties, with a 181-mile 10-inch pipe line connecting extensive producing leases with tanker loading facilities at Atreco, near Beaumont.

Sale of the East Texas properties will place Cranfill-Reynolds Company upon a firm financial basis, with practically no indebtedness, considering also the oil and cash payments due the company as result of previous sales of holdings; and the company will be in favorable circumstances for future operation as an oil producing unit, with extensive valuable properties remaining after the large East Texas deal. Aside from the holdings which it will retain in the East Texas field proper and in adjacent semi-proven or wildcat areas, the company has approximately 75 producing leases in other districts of Texas and in New Mexico. In Fisher County, West Texas, the company has practically all promising acreage of an entire field comprising about 4000 acres, and similarly, it owns leases covering nearly all of the Esperson field, Texas Gulf Coast. Other properties of the company include productive leases in Brown and Eastland Counties, Central West Texas, in Winkler County, West Texas, and in the Darst Creek field, South Texas.

Threat of Market Break in East Texas Has Been Averted

Kilgore, Texas.—Threat of an impending break in the crude market and price situation in the East Texas field has apparently been averted. Leading purchasers of oil resumed taking on new connections towards the close of last week, and immediate market relief has been pledged for every completed oil well in the field not already served. A committee of representatives of purchasers and pipe line companies has been re-established to provide prompt and adequate connections for future completions after having been disbanded early last week by Brig. Gen. Jacob Wolters, commander of the militiamen charged with proration enforcement, for failure to function properly. Gen. Wolters also announced at the conclusion of a meeting held January 19 by the original well connection committee at military headquarters here that operators must shuffle for themselves in lining up new connections for future completions, but this order has since been amended. Operators seeking connections are now instructed to file their requests with the military at Kilgore.

Between 75 and 100 completed wells, including those held by independent companies that formerly held private market outlets, were in need of connections early last week. New connections were being barred by most purchasers that pay the 83-cent posted price, thereby giving the owners of wells without connections the choice of adding to storage, or patronizing the price cutting buyers. Numerous small refining plants in the field are the principal outlets for less than posted price crude, which has been mostly confined to contracted deliveries, and runs made from leases having defective titles. Possibility of a steadily mounting volume of distressed priced crude going on the market carried a distinct threat to the continuance of the 83-cent price by the majors. The odd feature of the situation was that the undermining influence was coming from connections turned away by the majors, who ordinarily would be expected to head off such developments if a stabilized market was sincerely desired.

Through the efforts of John G. Pew, Sun Oil Company, Dallas, and other members of the short lived well connection committee, a meeting of representatives of purchasing and pipe line companies was held at Kilgore, January 21, to make a new attempt towards relieving the distress crude situation. An entirely different attitude was shown by all purchasers at this gathering, and all unserved wells were allocated among the majors in short order. Humble Oil & Refining Company pledged support for about 46 connections, including 21 on leases held by Cranfill-Reynolds Company; 10 on Houston Oil Company's properties; three for Heep Oil Corporation et al, with the remainder serving single well owners. Sun Oil Company, Shell Petroleum Corporation, The Texas Company, Arkansas Fuel Oil Company absorbed the remaining completed wells without connections.

Danciger Oil & Refining Company's eight wells were distributed among the above purchasers, thereby forestall-

ing the filing of one or more court charges against purchasers by this independent company under the common purchaser act. Papers had been drawn up by officials of Danciger Oil & Refining Company to make a court test of the state law as a means of obtaining market relief for its closed-in wells. This company has a completed 10,000-barrel daily capacity refinery in the field, but has not placed same in operation because of proration limiting the output of controlled wells to less than the volume of crude required to supply the plant. Officials of the company agreed to abide by proration, and sell its allowable production to common purchasers, but had failed to obtain market relief for all wells until this last meeting of the well connection committee.

Reinstatement of the well connection committee has since been approved by Brig. Gen. Wolters, and plans are to have a weekly meeting to assign new well completions to the various purchasers. Provisions have been made for operators to file their request for pipe line connections with Master Sgt. Giles E. Wimberly, who is located at the Kilgore military base, and disposition will be up to the committee, which apparently is to be supported in its decisions by all major purchasers in the future.

Kilgore, Texas.—Judge Amos L. Beaty, president of the American Petroleum Institute, in an address delivered January 26 to representatives of pipe line companies of East Texas asked for co-operation in taking care of distress oil to avoid chances of disrupting the crude market there. Judge Beaty expressed confidence in the opinion that 30 days more would relieve the present situation inasmuch as only 24 wells are unconnected, and those are under consideration by some major pipe line company.

Mapes Elected Chairman of Petroleum Section A. S. M. E.

Tulsa.—The Petroleum section of the American Society of Mechanical Engineers held its annual meeting here Monday, January 18, at which time it elected Clarel B. Mapes, technologist and assistant secretary of the Mid-Continent Oil & Gas Association, as chairman for 1932. Other officers for the new year are C. C. Rae, production engineer for Skelly Oil Company, first vice chairman; Harry H. Wright, production engineer for Gypsy Oil Company, second vice chairman; and I. W. Alchorn, Oil Well Supply Company, secretary-treasurer. Members of the executive committee comprise the new officers, Harry F. Wright, consulting engineer and retiring chairman; L. A. Ogden, production engineer, Empire Companies; and Raymond Carr, production engineer, Sinclair Oil & Gas Company.

Prior to the business meeting members heard J. G. Martin talk on "Ethyl Gasoline." Mr. Martin heretofore has spoken before several of the technical societies in Tulsa, but has not previously set up equipment to demonstrate methods of making knock tests on gasolines.

Start Testimony in State Suit on Yates Field Land

Austin, Texas.—Preliminary pleas were completed Friday, January 22, in the suit of the State of Texas vs. R. B. Whiteside et al, being tried before Judge C. A. Wheeler in the 53rd district court at Austin.

Testimony began Monday with introduction of maps, field notes and other data on the location of the land in controversy. S. E. Clark, chief draftsman of the land department, Land Commissioner J. H. Walker and others testified to the various exhibits introduced.

A cross action was filed against the State, contending that Mrs. Mattie Smith was mentally incompetent at the time she deeded this property. This action was ruled out of the present case, however, when Judge Wheeler favored the State's plea in abatement which contended that this question was not involved in the present suit.

The question involved is the propriety of an old survey made of the Yates oil field more than half a century ago. This property was later surveyed by the State, and it was found that much land was included that should have been omitted.

The property is worth nearly $350,000,000, as most of the land lies in the richest part of the Yates field. The State seeks $20,000,000 in royalties from oil which has been produced up to the present time.

Allred Suit Witnesses Called To Austin Court February 8

Austin, Texas.—District Judge J. D. Moore, before whom the $17,000,000 oil ouster suit will be tried, has directed several officials of The Texas Company to appear here February 8 to produce the code of ethics of the American Petroleum Institute, 100 telegrams, 200 letters, several price change notices, and to testify concerning them. R. C. Holmes, president, C. B. Ames, F. T. Manley, W. S. S. Rodgers, E. M. Crone, J. P. Gruett, H. W. Dodge, of New York, T. J. Donoghue, G. L. Noble, J. S. Leach of Houston, were ordered to be present.

Attorney General James V. Allred has reported that he is now ready when his suit to oust 15 oil companies and two associations from doing business in Texas, is called in Travis County court as service has been completed on Socony-Vacuum Corporation, Standard Oil Company of New Jersey and Standard Oil Company of California, alleged parent companies of Texas companies included in the suit.

Elbert Hooper and H. D. Bishop, assistants to Attorney General Allred, have returned from New York City and San Francisco, respectively, where they went to supervise service of processes on the defendant corporations. The sheriff's departments of those cities had failed to serve the papers on the proper persons originally it was found when the case was first called.

Stephens County Test Blows In and Runs Wild for 20 Hours

Duncan, Oklahoma.—Continental Oil Company's Dare 1, NEc SW SW Section 2-2s-8w, blew in unexpectedly on Thursday, January 21, and ran wild for about 20 hours, making an estimated 35,000,000 cubic feet of gas and 25 barrels of oil daily. The well is located in the eastern portion of the old Empire field, approximately eight miles southwest of the town of Duncan in western Stephens County. The showing, which was not expected, came from sand logged at 1435 to 1440 feet, apparently either the Miller or Nigh sands of the field proper. The Miller sand in the main portion of the pool is a gas sand yielding from 1,000,000 to 12,000,000 cubic feet initially, and the Nigh is an oil sand in which wells have varied from 10 to 25 barrels initially. Although activity in Stephens County has not approached boom proportions during the past few years a majority of the activity in southern Oklahoma for the past few months has been around old pools in the district. It is understood that Continental Oil Company's Dare 1, is a forced test due to lease obligations.

Geological Survey of Bavarian Concession To Be Followed by Oil and Gas Development

NEW YORK.—Bavarian Oil and Gas Corporation of Delaware was incorporated recently to take over from John Hays Hammond, Harris Hammond and J. Elmer Thomas a 90 per cent interest in the Bayerische Mineral-Industrie, A.-G., which latter company was organized under the laws of Bavaria in November, 1930, to take title to an oil and gas concession acquired from the Free State of Bavaria.

The concession comprises all of Southern Bavaria from the Danube River to the Austrian frontier in the Tyrolean Alps, and contains 3,117,900 hectares (roughly 7,800,000 acres). Its area corresponds roughly to that of the Munich Basin,[1] which is large as the whole North German Plain, and nearly as large as the San Joaquin Valley of California. Indeed, it is expected that the character of the sediments to be penetrated in drilling will show a striking similarity to those of California. Thus, rotary equipment is indicated for its development.

It is said that no plans for drilling will be announced until the program of geological and geophysical investigation is advanced further. Geological reconnaissance and surveys by magnetometers and torsion balances were carried on throughout 1931; and four such parties will shortly take the field again for completion of this work. It is understood that the gravimetric regional work is about one-third done, and that the magnetic regional work is about two thirds complete.

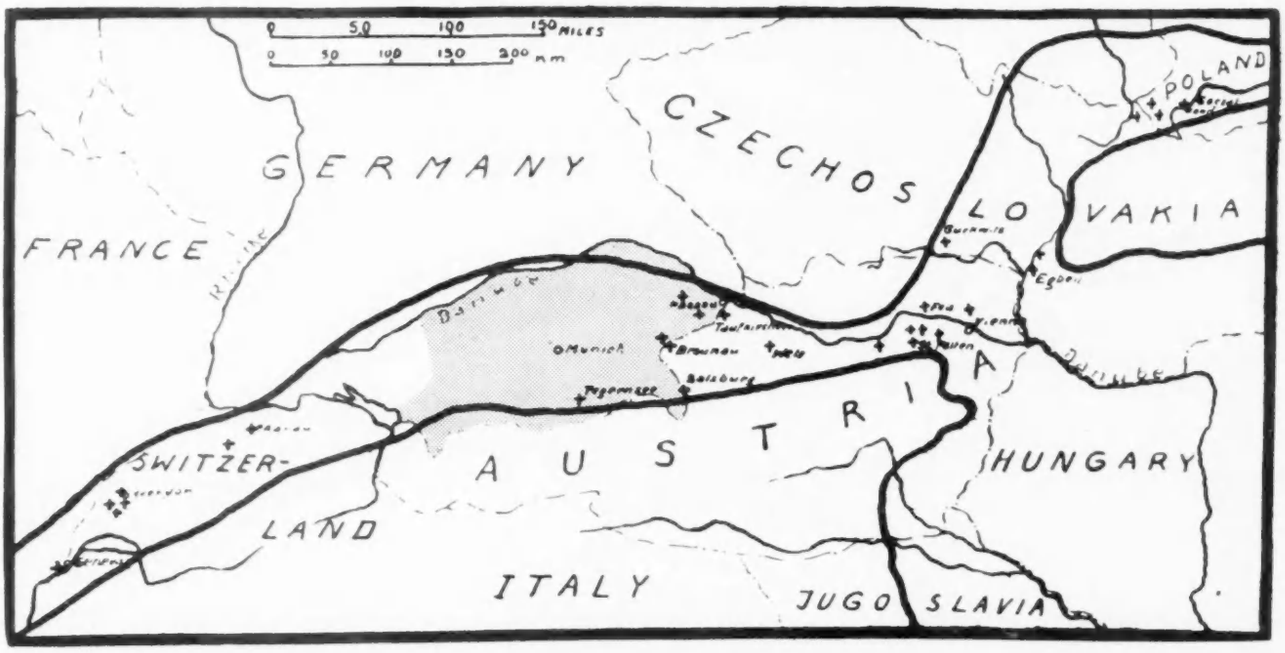
The concession embraces the historic oil seepage near Tegernsee, which was known prior to the discovery of America, and includes one small pumping well which has a production record of 28,000 barrels to date. Its output is of 39 degrees A. P. I., and has a paraffin base. Natural gas is also produced in small quantities from shallow wells at Salzburg and Brunau, near the eastern boundary of the concession. Indeed, production and seepages of oil and gas occur also on both sides of the property, east and west.

The concession covers a well-developed basin in the trend of Tertiary rocks which extends clear across Europe, and in which occur numerous showings, as well as commercial production of oil and gas, as in France, Switzerland, Austria, Czecho-Slovakia, Poland, and Roumania. It is expected that simple anticlinal folding will be found to provide reservoirs suitable for the accumulation of oil and gas; and that drilling depths will range between 3,000 and 5,000 feet.

Harris Hammond of New York, is president of the new company; and J. Elmer Thomas of Fort Worth, is vice president. W. L. Pratt is secretary and treasurer. Mr. Thomas, who is in charge of field operations, will return shortly from New York to Europe, and will make his headquarters at Munich.

Dr. Donald C. Barton, of Houston, is directing all geophysical work.

[1]This basin is indicated on a map published on page 63 of The Oil Weekly of September 11, 1932, after Dr. Sommermeier; and on another map published in connection with Kauenhoven's paper on "The Oil Fields of Germany," published in Volume 12, No. 5, page 463, of the Bulletin of the American Association of Petroleum Geologists for May, 1928.



Paleographic map of the Subalpine oil province in the Lower and Middle Miocene showing shore lines (black lines), oil occurrences (crosses), and political frontiers.

(From Paper on "The Oil Fields of Germany" by Walter Kauenhoven, published in the Bulletin of the American Association of Petroleum Geologists, Vol. 12, No. 5, page 463, May, 1928.)

Personal Mention—Men You Know

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R. C. GANO, president of Rogers-Gano of Illinois, was seriously injured in an automobile accident near Pittsburg, Kansas, January 24. Mr. Gano and his wife were en route to Kansas City. Their automobile collided with a smaller car and Mr. Gano suffered a fracture of two vertabrae. Reports are that his condition is still serious but he is expected to recover.

H. F. SINCLAIR, chairman of the board, Consolidated Oil Corporation, which will be formed by the merger of Sinclair and Prairie companies, reached Tulsa last week for a visit. He was accompanied by Daniel A. Pierce, vice president, who has been here on recent trips with Mr. Sinclair. It was the first Tulsa visit for Mr. Sinclair since announcement of the merger.

W. H. WORTHINGTON was in San Antonio on a short visit with family and friends last week from San Luis Potosi, Mexico, where he has been located for the past year in the mining business.

Worthington was for many years a mining engineer in Mexico for the Guggenheims and other large mining interests.

WILLIAM INSKEEP and Louis Chappuis have returned to Los Angeles, following extensive leasing operations near San Francisco. Chappuis is a consulting geologist and Inskeep a well known land man.

RICHARD STRESAU, A. O. Smith Corporation, Milwaukee, died suddenly of heart failure in his office on the morning of January 13, 1932. His hosts of friends in the oil industry and in engineering circles generally will deeply regret to learn of his death.

Born in Galveston, Texas, 51 years ago and graduated from the Massachusetts Institute of Technology in 1904, he first went to work for an uncle who was engaged in the electrical business in Europe. Later he returned to this country and did some important engineering work for the government during the war. In 1919 he joined A. O. Smith Corporation and his boyhood friend, L. R. Smith, who is now president of that company.

RICHARD STRESAU

It was in this connection that he was largely responsible for the successful development of the "Smithwelding" process and its application to the manufacture of courplings, pressure vessels and pipe. His cheerful personality and his outstanding ability endeared him not only to his associates and to the oil industry, but also to engineers everywhere.

He was the originator of many brilliant inventions and was particularly noted for his engineering contributions in the field of electric welding.

FREDERICK S. FALES, vice president of Socony-Vacuum Corporation, was elected president of Standard Oil Company of New York, Incorporated, January 25. He succeeds Charles F. Meyer, who retires as president of Standard Oil Company of New York and as director and chairman of the executive committee of Socony-Vacuum Corporation, but who will remain a director of the former. Fales entered the manufacturing branch of Standard Oil Company of New York in 1903 and was elected a director in 1919 and vice president in 1927. Richard P. Tinsley, treasurer of Standard Oil Company of New York and secretary-treasurer of Socony-Vacuum Corporation, was elected director of Socony-Vacuum Corporation.

DAN J. MORAN, president, and E. J. Nicklos, vice president in charge of production of Continental Oil Company, Ponca City, Oklahoma, set their plane down in Fort Worth Monday afternoon to spend the night when bad weather interrupted a scheduled visit of properties of the company in Southwest and West Texas.

GAGE LUND, petroleum engineer for The California Company on duty in the East Texas oil field as an observer, and Miss Mary Frances Lamar of Dallas, Texas, were married at San Antonio, January 23. The couple will make their home at Tyler, Texas, upon the conclusion of a trip to New Orleans.

D. E. LEGAN, superintendent in charge of operations for Tidal Oil Company in the East Texas oil field with headquarters at Tyler, visited the Texas division offices of the company at Fort Worth early this week.

LATEN STANBERRY, chief of the gas utilities division of the Texas Railroad Commission, is recovering from injuries sustained when his car overturned on the Austin-Houston highway near Chapel Hill. The car was forced into the soft dirt along the edge of the paving while passing a truck.

ROSS M. STUNTZ, production engineer for Empire Companies with headquarters in Bartlesville, told members of the Kiwanis Club of that city some of his experiences while assisting in the drilling of a wildcat test on Prince Edward Island, which lies directly north of the Province of Nova Scotia, Canada.

HUGH McCLELLAND, a consulting geologist who formerly maintained offices in Tulsa, has moved to Hutchinson, Kansas, where he will continue the practice of consulting geology. While employed by Burke-Greis Oil Company, McClelland devoted a considerable amount of time to the study of Kansas geology and is well known for his paper, "Subsurface Distribution of pre-Mississippian Rocks in Kansas and Oklahoma," published in the 1930 bulletin of the American Association of Petroleum Geologists.

NELSON K. MOODY, president and Dana H. Kelsey, vice president and general manager, Prairie Oil & Gas Company of Independence, were Tulsa visitors during the past week.

▼ PERSONAL MENTION—MEN YOU KNOW ▼

H. W. MILTON, head of the land department for Stanolind Oil & Gas Company in the Southwest Texas district with headquarters at San Antonio, has been transferred to the state headquarters of the company at Fort Worth to become an assistant secretary and division manager of the land department. R. H. Feltner, who was at the head of the land department of Southern Crude Oil Purchasing Company prior to its absorption by the above company, has succeeded Milton at San Antonio.

CAPTAIN A. E. HIGGINS of New York has been made secretary of the natural gas division of the American Gas Association with headquarters in Dallas Gas Company's building at Dallas, Texas. Captain Higgins succeeds E. J. Stephany, who resigned recently. The annual convention of the natural gas division will be held in Tulsa, May 8, 9 and 10, and the preliminary program is now being prepared by the new secretary.

ROY E. DEARING, 43, member of the drilling contracting firm of R. H. Dearing & Sons, died at his home in Dallas at noon January 19 after being ill more than four months. He was also a vice-president of Royal Petroleum Corporation, which is operating in the East Texas field. Survivors include R. H. Dearing, father; W. R. and C. B. Dearing, brothers; and two sisters.

HARVEY C. FREMMING, president of the Oil Workers Union of California, has been appointed by Governor Rolph to represent California at Washington in the efforts to obtain a tariff on petroleum products brought into this country.

JOSEPH LEWIS PENNEY passed away January 16 of cerebral hemorrhage, in Tulsa, just seven weeks after the death of his wife, Mabel Penney. The son of Captain Fred and Mrs. Sarah Penney, he was born August 12, 1897, at Haverstraw, New York.

One of the organizers and a director of Lucey Products Corporation, Mr. Penney had been active in the oil industry since 1919.

W. G. HELTZEL, general superintendent, Stanolind Pipe Line Company with headquarters at Tulsa, spent several days last week at the Fort Worth district offices of the company and also in making an inspection tour of the trunk line system as far south as Mexia accompanied by O. H. Powell, superintendent of the Texas division.

H. E. ZOLLER, district petroleum engineer in East Texas for Shell Petroleum Corporation, leaves this week for The Hague where he will spend six months at the Shell's training school. Mr. Zoller is a graduate of the Rolla School of Mines and has been with his present connection seven years, previous to which he was with Comar Oil Company.

E. B. REESER, president of Barnsdall Oil Corporation, has arrived at Sacramento to discuss the California oil situation with Governor Rolph. He was recently appointed by the governor to make a non-partisan survey and to aid in placing the industry on a sounder basis.

PRESENT officers of the Houston Geological Society, elected recently, include Albert G. Wolf of Texas Gulf Sulphur Company, president; Grady Kirby of Sinclair Oil & Gas Company, vice president, and John F. Weinzierl, consulting geologist and geophysicist, re-elected as secretary-treasurer.

The present administration has inaugurated a new policy of publishing in mimeograph form the papers which are given on programs of the society for distribution among the members. Meetings are held weekly, a program being scheduled each Thursday at a luncheon held at the Lamar Hotel.

The organization has 135 members. Although it is primarily a society of Houston geologists, its membership also includes persons in other parts of the state and some geologists and geophysicists residing out of the state and in foreign countries.

OFFICERS HOUSTON GEOLOGICAL SOCIETY

A. G. WOLF

GRADY KIRBY

JOHN F. WEINZIERL

Oklahoma--Kansas Field Notes

FLOYD SWINDELL, *Staff Representative, Tulsa, Oklahoma*

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864th Completion Is Recorded Oklahoma City Pool This Week

Oklahoma City.—Two wells were added to the completion list of Oklahoma City field during the past week, bringing the total number of completions to 864 over a period of a little more than three years.

Phillips Petroleum Company, leader during the past few months in the number of completions, scored another hit in its Gallman 1, CN½ NE NW NE Sction 3-11n-3w, when production gauged 6640 barrels the first three hours flowing through a four-inch choke against a back pressure of 400 pounds and handling 62,000,000 cubic feet of gas. Total depth is 6482 feet in Wilcox sand. Sinclair-Texas Pipe Line Company is connected with the well.

Slick Estate's Long 2, NW NW SW SE Section 15-11n-3w, produced 3549 barrels in four hours from 108 feet of Wilcox sand topped at 6430 feet. Gas gauged at the rate of 34,000,000 cubic feet flowing against 100 pounds back pressure.

Slick Estate's Classen 1, NW NW Section 2-11n-3w, blew tools out of the hole while cleaning out last week. Within an hour it was under control and little or no damage had been done. This is an old producer in the northern portion of the pool and within a few locations of Morgan Petroleum Company's Stout 1, which blew wild three days in the latter part of 1930.

Sinclair Oil & Gas Company's Vencl 14, NE SE SE Section 31-11n-2w, old Wilcox producer in the southern portion of the pool, was running 4½-inch casing after being deepened to 6456 feet. This well originally was completed in Wilcox sand and operators are now testing the Simpson below Wilcox formation.

Oklahoma City Production Drops; Operators Want More Crude Taken

Oklahoma City.—The fact that Oklahoma City, with an allowable production of 120,000 barrels, produced only 95,630 barrels during the week ending January 23, while during the same period pools in the general Seminole district were producing 132,000 barrels daily, should be a strong talking point for those who oppose the emergency order issued by the corporation commission on January 10.

Hearing on the Plains Petroleum Company's petition, which was to have been held on January 26, has been indefinitely postponed probably due to a general belief that concerted action will bring about a readjustment which will bring equity between pools of the state.

There seems to be no just ground upon which it can be contended that purchasers are following the spirit of the Conservation Act of 1915 when nominations of 135,000 barrels are made in the six year old Seminole district while in Oklahoma City, a pool only slightly over three years old, the purchasers nominate less than the 120,000 barrels which have been set as daily allowable production under the emergency order of January 10.

According to the Plains Petroleum Company's petition, filed by B. G. Patton, its president and a member of the Oklahoma City proration committee of three, practically all of the purchasers of Seminole crude also have ample pipe line or loading rack facilities in the Oklahoma City area. It is also a fact that one major purchaser has radically reduced runs from the latter pool, while at the same time taking on what appear to be unprofitable connections in an adjoining state.

Test Midway Between Burbank And Rainbow Bend Interesting

Newkirk, Oklahoma.—W. H. Atkinson et al's Hayes 1, SEc NE Section 24-28n-3e, was drilling at 2003 feet in shale break in the Tonkawa series. This test is interesting because of its location about midway between the Rainbow Bend field of Cowley County, Kansas and the Burbank pool in Osage and Kay Counties, Oklahoma, and approximately three miles north of production in the Mervine pool. The test is scheduled to go to Burbank or Bartlesville sand from which a showing of oil was obtained in a test about three-quarters of a mile to the west. This test was drilled in 1930 and encountered a showing of 1200 feet of oil in the hole from Bartlesville sand at 3184 to 3208 feet.

Cowley County Area East of Winfield Is Active District

Winfield, Kansas.—One of the most active among the smaller plays in Kansas is that now being carried on two miles east of Winfield, in west central Cowley County. This is one of the pioneer areas of Kansas, shallow gas production having been found as early as 1902. History of development between that date and 1915 is very vague and it is only known that several gas tests were drilled by the city of Winfield. The first commercial oil production was found in the Layton series at a depth of 2300 feet.

During 1926, 1927, and 1928, the Winfield pool proper, was developed in "2300-foot" or Layton sands and during the latter part of 1928 and 1929, the Bartlesville sand or its equivalent, produced considerable quantities of gas and some oil.

The present development, which started in 1931, is principally a deepening campaign but several new wells are being drilled. More than a dozen wells have now been drilled to the Arbuckle "Siliceous" limestone found at 3286 to 3318 feet. Initial production ranges from 100 to 800 barrels on pumping and swabbing tests.

Additional Locations Needed If Carr City's Drilling Continues

Tulsa.—The drilling spurt which has occurred in the Carr City pool during the past few weeks is due to be short lived if additional locations are not made in the near future, and there is little indication that anything more than forced drilling will be done under present conditions.

Amerada Petroleum Corporation's L. Tiger 3, NE SW NE Section 3-8n-5e, was drilled to a total depth of 4016 feet in Viola limestone, from which depth it produced 600 barrels the first 11 hours. The same company's J. Tiger 5, NW SE NW Section 3-8n-5e, swabbed 136 barrels of oil in 22 hours while drilling the plug. Eight-inch casing was set at 3914 feet and

the production was obtained from Hunton limestone topped at 3945 feet. It is understood that operators will run six-inch casing and test the Wilcox sand. Gypsy Oil Company's Tiger 2, NE SW NW Section 3-8n-5e, swabbed 85 barrels of oil in 18 hours and had 600 feet of fluid standing in the hole with water showing. Production is coming from Hunton lime topped at 3943 feet and the water apparently is coming from Wilcox sand logged from 4191 to 4196 feet.

Pure Oil Company had 1500 feet of oil in the hole and swabbed 60 barrels in 40 minutes. Total depth is 4260 feet in Section 3-8n-5e. Production is coming from Wilcox sand logged at 4155 to 4163 feet.

Test in Southern Portion Of Tatums Pool Is Planned

Ardmore, Oklahoma.—Carter Oil Company is rigging up rotary tools and expects to start drilling sometime this week in its Laura Lynn 1, CSW SE NE Section 31-1s-2w, in the southern portion of the Tatums area. This is the fourth test to be announced within recent weeks and the Tatums pool seems destined to regain the lead which it held during 1930 and part of 1931.

B. F. Lunday et al have resumed drilling after setting surface casing at 300 feet in their Morris-Luster 1, NE NW SW Section 8-1s-2w, wildcat test located approximately 1½ miles northeast of production. Walter H. Gant and Amos Drilling Company were shut down waiting on cement to set on the surface string at 39 feet in their Short 1, SW SW SW Section 18-1s-2w, north offset to Carter Oil Company's Taylor 2, which was completed for 1022 barrels the first 24 hours. Initial gauge was taken the first week in January, 1932. Tatums Oil Company was digging pits for its Joe Carter 1, SW SW SW Section 13-1s-3w, about one-half mile north of production in the eastern extension.

Schermerhorn-Ardmore Oil Company was underreaming 6⅝-inch casing at 852 feet in red shale in its Bourland-Howard 1, NE NW SW Section 1-6s-5e, on the southern border of the Ardmore Basin in northern Love County, and within about two miles of production in the Brock field.

Importance of Barton-Ellsworth Arch Area Matter of Speculation

Wichita.—Conditions existing at several wells in the Barton-Ellsworth Arch or central western Kansas area during the past few weeks leads to the question of how much of a threat this new development actually will be. Derby Oil Company's Berscheidt 1, NW NW SE Section 12-20s-11w, south offset to Hilligos et al's Isern 1, is producing at the rate of about eight barrels of oil and one-half barrel of water per hour from Arbuckle "Siliceous" limestone at 3289 to 3342 feet. No definite reports have been made available and it is not known whether analyses have been made but it is understood that the water is fresh. The showing of this well is disappointing in view of the fact that the north offset is pumping at the rate of about 500 barrels of oil daily, making no water.

Midwest Exploration Company's Berscheidt 8, CNW SE Section 12-20s-11w, on the same 40-acre tract with the Derby well, had a small showing of oil in the top of the Arbuckle "Siliceous" limestone at 3298 feet and set 8¼-inch casing at 3293 feet. It is now shut down waiting on cement to set. Allison and Fitzwilliams et al's Stratman 1, CSW SE Section 23-16s-10w, were trying to loosen 6⅝-inch casing stuck at 3385 feet, only five feet above the point at which operators had planned on setting. Arbuckle limestone was logged at 3390 to 3391 feet with a small amount of oil showing. This test had a showing of oil and gas at 3028 to 3035 feet and a 4,500,000 show of gas at 3095 to 3098 feet, showing which have not been encountered or have not been observed in other tests in the area.

Darby Petroleum Company et al's Number 1, NW NW NW Section 25-17s-10w, completed October 15, 1930, and shut in without gauging, is now pumping about 500 barrels of fluid daily cutting 12 per cent water and two per cent b.s. Initially it was estimated at 2000 barrels but upon securing connections late in 1931, it pumped only 1182 barrels of oil and was showing 60 barrels of water. Operators believe that the water is coming from a sandy streak at 3219 to 3220 feet and will underream the 6⅝-inch casing to set below the latter depth.

Kansas Conservation Law Suit Invokes Fourteenth Amendment

Wichita, Kansas.—Declaring the Kansas conservation law unconstitutional and that it deprives land owners of their rights as citizens, William Schurr and other land owners filed suit in the district court at Lyons, Kansas, against members of the public service commission whose duty it is to enforce the law enacted by the last session of the legislature. It is based on the fourteenth amendment to the constitution of the United States, which specified that private property cannot be confiscated without due process of law. Land owners in the Schurr pool and other central western Kansas area claim that the conservation act prevents their selling oil in quantities which would be possible were it not for the restrictions placed upon properties by the commission.

The most recent action of that body was to place the Eastborough and Voshell pools under proration, limiting production to pipe line outlet not to exceed 86 per cent of potential of the respective pools. The commission specified that the October and November, 1931, production averages, as shown by pipe line runs, will be the basis upon which the two pools will be prorated at present. This rule is to be applied to all wells having been completed in Eastborough on or after December 1, 1931, except wells producing from the chat horizon, which is exempted. Wells making 25 barrels or less daily in the Voshell pool are also exempted. The pipe line outlet from Voshell is understood to be about 8200 barrels daily.

According to an announcement made late in 1931 by Thurman Hill, member of the Kansas Public Service Commission, Kansas would make an attempt to hold daily average production to 100,000 barrels during the early part of 1932. During the past two weeks production in that state has not exceeded 99,000 barrels daily and during the week ending January 23, this figure fell to 97,535 barrels, with the reduction of production in the Eastborough and Voshell pools not being fully reflected.

Test of Seismograph "High" South Of St. Louis May Be Abandoned

Seminole, Okla.—Mid-Continent Petroleum Corporation was shut down awaiting orders and will probably abandon its Farmer 1, SW SW NW Section 2-6n-4e, wildcat test said to be located on a seismograph "high" about two miles south of production in the St. Louis pool. Wilcox sand was penetrated from 4418 to 4431 feet and the casing lowered to shut off water known to be coming from the upper portion of the Simpson formation. The hole is now filling with water and is making no oil.

News From California Fields

BRAD MILLS, ***Staff Representative, Los Angeles, California***

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Dominguez Field's Importance Shown In Study of Completions

Los Angeles.—Some idea of the importance of the Dominguez field may be gained by a study of the recent completions by Union Oil Company in the lower Callender zone. The original development program called for the inclusion of only 400 feet of producing formation, and the three operators adhered religiously to the agreement. During the recent deeper development, about as much more of the lower Callender zone has been taken to get unusual results.

The Dominguez field has long been respected as a great producer below the original producing formation, and the development of the past six months has proved this belief. Two or three of Union Oil Company's deep completions have been large producers and were drilled in record time and with a minimum expenditure of money. Enough has been learned from the most recent deep development to prove the field a very important reservoir in the Los Angeles basin. Some water has been present, but the deeper wells have been troubled less in this respect than were many of the shallower completions. The fact that the field is virtually controlled by three major companies will tend to force an orderly development of the deeper zones.

Richfield Oil Company, through R. M. Harris, is considering the deepening of three shallow wells on the east side of the field, and hopes to find the zone opened some time ago on Associated Oil Company's De Francis lease to the north.

Edge Test on North Dome Has Frozen Drill Pipe at 8800 Feet

Coalinga, Calif.—North American Oil Consolidated will run a string of 6⅝-inch to around 9300 feet in Blauvelt 1, edge test on the North Dome, if the frozen drill pipe at 8800 feet can be freed. Continued circulation has been of little avail and the hole appears to be in bad condition above 9000 feet. Plans call for deepening of the well to 10,000 feet to test the extreme lower portion of the zone. It will be an easy matter to perforate a portion of the 6⅝-inch casing between the 9⅝-inch shut-off at 8485 feet and the bad place in the casing if any part needs to be tested. Blauvelt 1 was drilled to 9500 feet and is the deepest well on the North Dome.

Petroleum Securities Company has been unable to pull the 5¾-inch flow string in Burbank 1, Middle Dome test, but will recondition the well for another production test as soon as adjustments and repairs are made. This well proved the Middle Dome to be productive, although it is not yet an official completion. The test was drilled to 9332 feet and plugged back to 9208 feet for the production test which established a semi-completion and proved the Middle Dome. The 8⅝-inch water string may be defective, and it is also possible that water is entering around the shoe.

The average cut of all producing wells on the North Dome is remarkably low, and cuts of one-tenth of one per cent are not unusual in wells that have been producing for a long time. The highest cut in any well is six per cent and this proportion of free water is no higher than at the time of completion. A slow but steady decline has been detected in all wells, but the drop has been so slow that the field has been affected but little by the total drainage of the 24 producing wells.

Operator Makes Production Test of Well East of Torrance

Los Angeles.—Ranger Petroleum Corporation is making a production test in Watson 2, Section 21-4-13, about a mile east of the Torrance field, to test the possibility of an extension to this flat-nosed structure. This well was drilled to 3785 feet, 6⅝-inch casing run to 3675 feet and a swabbing test for water shut-off made. The state inspector rendered a deferred decision, due to a decided rise in the fluid level. The hole has been cleaned out to bottom and about 150 feet of 4¾-inch liner run with packer on top. This well should make a small producer at best and would prove an extension to the field, rather than a new structure, according to geologists.

The Torrance field is a very flat structure and is by far the largest field in area in the Los Angeles basin.

Higgins Brothers' Hamlin 1, a deep test in the Torrance field, has been placed on the pump again at 4780 feet, but with a production of 25 barrels and as much water, the producer seems to have been overrated. Production of a light oil was important, but the small amount of zone above the schist did not warrant the interest which prevailed.

Long Beach, Santa Fe Springs and Huntington Beach Are Inactive

Los Angeles.—Drilling in the Long Beach, Santa Fe Springs and Huntington Beach fields is falling considerably below expectations, with little immediate increase in operations in sight. Working-over and deepening of old wells at Long Beach promised to start operations which would lead to a steady climb in field work but the decline of the 8100-foot zone at Los Cerritos and further restrictions along curtailment lines retarded operations.

Reports that extensive field work would be done at Santa Fe Springs were greatly exaggerated, although there was a possibility of an increase in plugging back and working over of wells. Some thought had been given to drilling of a few wells to the Meyer zone, but there is no real need for more oil.

Huntington Beach promised to break out into another townlot drilling campaign, but the deep zone failed to prove productive. This failure was a disappointment to many operators who planned deepening of a large number of wells. Many wells are barely making expenses in this field, and operators would welcome an opportunity to do better.

A large production from any field at this time or in the immediate future probably would lead to such low prices that the increase would do more harm than good.

Seal Beach Completion May Lead to Further Development

Los Angeles.—The completion of Continental Oil Company's McGrath-Selover 1 at Seal Beach with an initial production of 650 barrels from 6345 feet was an important development and may lead to more field work in the conservatively developed area. This well was drilled to 6389 feet in the McGrath zone, but was plugged back a short distance. The top of the deep zone was found at 6135 feet, and 233 feet of perforated four-inch liner was run. The size of this completion does not compare with that of many shallower producers in the field, but it was larger than expected at this depth. Seal Beach is still regarded as a good potential producer below the shallow zones.

Standard Oil Company is rigging to deepen San Gabriel 12, an offset to Continental Oil Company's McGrath-Selover 1, but does not plan extensive field operations. San Gabriel 12 has been a producer at 5451 feet.

Smith Petroleum Again Trying To Extend Lawndale Operations

Los Angeles.—Smith Petroleum Company, pioneer operator in the Lawndale field, is again attempting to extend its operations in a district which was one of the outstanding failures of 1929, and may be able to complete Pioneer 9 as a good producer at 5929 feet. Cores taken from below 5700 feet showed a good oil sand and the average formation was better than that included in the few completions of two and one-half years ago.

The Lawndale field has settled to a production of only 300 barrels from a few wells, but the belief still exists that a much larger output can be developed. Around 100 wells were started during the early part of 1929, but the narrow zone which accounted for the discovery well failed to be productive toward the east. The oil appears to have been trapped where certain sands feather out to the west, and the thicker formations to the east have carried water. Both the major and smaller independent companies rushed in to develop holdings.

McKittrick Test Is Now Down to 2500-Foot Level

Taft, Calif.—T. H. Purman is drilling around 2500 feet in No. 1, a test in the McKittrick district. Some oil has been developed nearby and possibility of production in a new zone has attracted considerable interest. The well is located roughly about midway between the Belridge and McKittrick fields and along the fringe of the valley.

Standard Oil Company drilled a well in the district several years ago and good showings were encountered. Both oil and gas have been found in small quantities in other tests. The Temblor zone is expected above 5000 feet, but it may lie deeper at this point.

The west side of the San Joaquin valley has a long series of fields along the fringe, most of which have been found at shallow depths. This oil has been heavy as a rule, but deeper development might disclose a lighter oil zone. The Temblor formation should generally deepen to the south, but there is no definite reason why it should not be found at nominal depths where other formations are so accessible.

Additional Drilling in and Near Mt. Poso Field Likely

Bakersfield, Calif.—Developments which favor crude produced in the Mt. Poso field may lead to additional drilling in and near the field, but companies holding acreage on the structure can easily meet needs from storage and from wells already completed. It has been found recently that Mt. Poso crude makes an excellent anti-knock gasoline when cracked, and one major company plans to concentrate on this oil if necessary. These optimistic reports may lead to drilling of edge leases which obviously stand little chance of production; but possible extensions and even nearby "highs" with some merit may be drilled.

Modoc Petroleum Company will drill a well on the northwest quarter of Section 28-26-28, about two miles north of the main Mt. Poso field and near two small outpost producers. The producing zone is found above 1700 feet and a 15-17 gravity oil is obtained.

Mt. Poso oil also makes a good lubricating stock, but it has yielded a very small percentage of gasoline, on a straight run basis.

Playa del Rey's Deeper Zone Holds Possibilities

Los Angeles.—Deepening of a few wells to the schist at Playa del Rey has been of little importance, but the deeper zone seems to hold the greater possibilities. An occasional test of the bottom of the lower producing zone has been made, and development of the shallow zone in the townlot sector has ceased after most of the producers indicated that they might not pay out under unfavorable conditions in the industry.

The field was discovered in the deep zone, but the greatest wave of development was in the shallow zone opened by Union Oil Company. Both formations were low pressure zones, but the shallower sand offered the least expensive means of completing wells.

Promoters and others in the townlot section finished their wells where oil could be had first, but it can not be said that more profitable production could have been obtained by continuing to the deeper zone around 6100 feet.

Development of the larger leases will be chiefly in the lower zone. Two or three wells have been completed recently in the schist around 6000 feet, but only a small flow was obtained.

Possible Need for Gas Accelerates Leasing

San Francisco.—The future need for more natural gas than may be furnished readily by the oil and gas fields now known has led to an extensive leasing program over a wide area. Standard Oil Company of California and other companies have been considering the possibilities of several districts, with gas as the principal objective and oil as secondary. Tehama County has been regarded with favor for some time by several operators, and Standard Oil Company of California is reported to have leased some land in this county.

One block of nearly 1000 acres was leased near Gerber, drilling to start within five years. The general area in which the company is interested lies west of the Sacramento River and about midway between Corning and Gerber.

Private companies have drilled for oil and gas in Tehama County for some time, but the larger companies have been content to watch operations and to secure leases in the most promising districts.

Certain districts of central and northern California hold more promise for gas production than the newer southern formations, according to geologists. Some gas has been developed, but the supply did not warrant extensive pipe line construction.

Houston.—Jones and Tennant, drilling W. P. Davis 1 in the A. G. Hale Hrs of San Augustine County, are reported to have had a slight showing of gas and oil in a sand cored at 1276-82 feet. Davis 1 is now drilling at about 2100 feet.

NORTH AND WEST TEXAS ▼ FIELD NOTES ▼

Young County Well Makes 640 Barrels Daily on Test

Wichita Falls, Texas.—Rated among the largest wells now on production in Young County, Dewey M. Knox et al's Mrs. A. R. Manning 1, located in semi-wildcat territory in the east central part of the county, gauged 320 barrels of 41° gravity oil during first 12-hour gauge flowing through one-quarter-inch choke on two-inch flow line leading to lease tanks. This producer is an east offset to Knox et al's H. Brashaw-Burkett 1, which opened the pool last May from the Strawn sand horizon at 2695-2713 feet, with the hole bottomed in shale at 2727 feet, making 80 barrels oil and some salt water daily. Failure to obtain pipe line connections has retarded exploration work until the drilling of the offset. Manning 1 is located in the southwest corner of Lot 7, Section 3412, and northeast of Graham. It logged Strawn sand at 2749-2758 feet, with a surface elevation of 1194 feet. The above two wells are four miles from the nearest production.

Texas Record Depth Well in Big Lake Field Ready to Test

San Angelo, Texas.—Attaining a state record depth of 9004 feet, Group One Oil Corporation (Continental Oil Company's) University 3-B, located in the Big Lake field, was preparing to unload rotary mud and make a production test early this week after having been killed and deepened on several occasions recently for the purpose of lowering the gas-oil ratio. This well was deepened from 8970 feet to the above depth late last week, and in making the additional hole encountered a soft break in the lime, thereby indicating a probable increase in the oil yield, which has been averaging close to 2500 barrels daily and about 12,000,000 cubic feet of gas. The lower pay in this field is the source of the so-called low gravity crude, carrying about 40 per cent high grade lubricating oil.

Casing that ranks among the most expensive for its size is being used by Group One Oil Corporation on two other wells that are deepening with a view of curbing gas consumption, and lowering the gravity of the oil for lube oil manufacturing purposes. This company's University 1-B, discovery well of the deep horizon, has deepened from 8523 to 8596 feet after plugging back and making new hole below 5100 feet. A string of flush joint pipe of 5½-inch outside diameter has been cemented with 300 sacks at 8528 feet, and drilling will be resumed shortly. University 2-B, which was originally completed last April at 8667 feet capable of flowing 20,000 barrels of 60 gravity oil and 250,000,000 cubic feet of gas daily, has been deepened through the big gas flow to 8740 feet. This big well has remained closed in since completion because of gas waste, and danger of breaking loose from its high pressure fittings. A string of casing similar to the above was started in the hole last week to be cemented at 8680 feet, but stuck at 8533 feet. Efforts to pull the pipe parted the string near the bottom. The drilling crew were meeting with success in recovering the lost pipe early this week.

This special type of pipe is furnished by National Tube Company and Spang, Chalfant & Company. It is known as grade "D" seamless, and weighs 20 pounds per foot. It is shipped to the California plant of Stone-Doheny Company to be equipped with the latter's special flush joint; this extra work and the long transportation costs makes the pipe the most expensive in use in the Southwest.

Big Lake Oil Company obtained a complete water shutoff in plugging back its University 1-C from 8908 to 8715 feet because of bottom-hole water. This well has been restored to routine production and is averaging 582 barrels of 43.3 gravity oil and 547,000 cubic feet of gas daily, flowing against 525 pounds casing pressure, and 50 pounds tubing pressure. It is located at a low structural point for the deep production, and sustained a sharp drop in oil and gas output by the plugging back efforts to eliminate water.

Production and status of the 10 deep well operations in the Big Lake field for the 24 hour period ending 7 a. m. January 24, 1932, is listed below:

	Oil Production	Gas Production	Pounds Casing Back Pressure	Pounds Tubing Back Pressure	Total Depth
Big Lake Oil Company—					
University 1-C	582	547,000	525	50	8908*
University 2-C	2395	17,859,000	450	..	8815
University 3-C	(Shut in)				8923
University 4-C	3194	17,779,000	320	350	8833
University 5-C	3251	17,371,000	725	725	8872
University 6-C	(Drilling by junk)				4810
Group One Oil Corporation—					
University 1-B	(Cemented 5½-inch casing 300 sacks at 8528 ft)				8596
University 2-B	(Running 5½-inch casing to 8680 ft)				8740
University 3-B	(Testing production)	..			9004
University 4-B	6661	41,813,000	1500	....	8587

*Plugged back to 8715 ft account water.

Geary Dome, Wyoming Test Is to Be Drilled Deeper

Casper, Wyo.—Midwest Refining Company's crews are rigging up rotary to drill deeper in the interesting wildcat test on Geary Dome, 12 miles east of Casper, which has been standing at 5340 feet for the last six months. Contract to deepen the test is let to Olson Drilling Company, Tulsa. Rig is being moved from the test drilled by Olson for Colorado Associated Oil Company on the Fort Morgan structure, northeastern Colorado, last year.

The Geary dome well found the first Wall Creek at 4863 feet; it was 100 feet thick and dry. There was a sand in the second Wall Creek, 4309-5314 feet, which showed considerable gas saturation. Chance for oil or gas or both exists in both the third Wall Creek and the Muddy, as well as in the Sundance still deeper.

When the Geary Dome well is finally drilled through the Sundance, all operations on the three related structures—Midway, Middle dome, and Geary—will be turned over to the Sidney H. Keoughan interests of Denver and all future development work will be carried on by that group.

Location of the test on Geary dome is on SE NW NW Section 22-34n-77w, Natrona County. The structure is almost directly east of the City of Casper. Midway dome is nine miles north of Casper, and the Middle dome is about seven miles northeast of the city.

Tulsa.—Announcement was made during the past week of the organization of Shirley-Kapner Company, valuation engineers, with offices in the Hunt building, Tulsa. The new firm is composed of Charles L. Shirley, formerly chief mechanical engineer in the northern division of Shell Petroleum Corporation; H. H. Kapner, former chief geologist for Wentz Oil Corporation, Ponca City; and Fred X. Sulzback, who has been a consulting engineer for a number of years in the East and in the Mid-Continent. They will conduct commercial and tax valuations and a consulting geological practice. All three men are well known in Mid-Continent oil circles.

East Central Texas Field Notes

H. H. KING, ***Staff Representative, Fort Worth, Texas***

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Minor Extensions Scored On East Flank of East Texas Field

Longview, Texas.—Minor extensions to the productive limits of the East Texas field on the east flank were scored at a number of points during the past week. Several of the completions included big wells to refute the growing belief that the reservoir pressure on the east side has dropped sufficiently to mark the passing of the flush life of wells located along the east border.

Simms Oil Company's Bob Woods 1 yielded a large producer in extending the Longview area a short distance to the east after logging sand at 3515-3523 and 3533-3535 feet, with the hole bottomed in shale at 3540 feet. This outpost test gauged 150 barrels during first 50 minutes on open flow gauge via two-inch tubing. It is located in the northwest corner of 100-acre lease, I. Skillern Survey, and south of the Longview-Gladewater highway. Simms Oil Company acquired Stanolind Oil & Gas Company's one-half interest in the lease in December for a $25,000 oil payment, and started drilling on the eve of the lease expiration date.

Katherine Ryan, Hobson and others' G. S. Mattox 1 widened the field a short distance to the east in the D. Sanches Survey with an initial flow of 87 barrels oil per hour through three-quarter-inch choke on tubing from sand at 3606-3618 feet, followed by sandy-shale and lime to a total depth of 3635 feet. This well is on a 10-acre lease, offsetting Sun Oil Company's Gray lease, and the latter company is rigging up Gray 3 to be a west offset. Bond, Gillespie and associates' K. K. Johnson 1, located east of production on a 10-acre tract near the south line of the D. Sanches Survey, flowed 80 barrels oil per hour through open tubing from sand at 3577-3583 feet, with broken sand and shale continuing to 3604 feet.

Stanolind Oil & Gas Company and Simms Oil Company developed one of the largest wells scored to date on the various joint interest properties in Gregg County in completing G. B. Tenery 2, located on the east end of 10-acre lease lying a short distance southeast of the discovery well of the Longview area, making 245 barrels oil per hour flowing through open 2½-inch tubing from sand at 3600-3612 feet. This well registered a closed-in pressure of 275 pounds on both tubing and casing after making the above initial flow test. It is a west offset to Tidal Oil Company's F. K. Lathrop 1, which threatened to make a dry hole during the early stages of the field's development last March by requiring about five days of swabbing to start the flow of oil from broken sand at a total depth of 3656 feet. In the face of this poor start the latter producer has flowed about 141,000 barrels of oil to date, with drainage possibility coming from adjoining properties on the west.

Materials have been moved in by Dodd & Markey of Tyler and others to a wildcat location about 3½ miles due east of the town of Kilgore for the drilling of a deep test on the J. F. Holt 40-acre lease, Haden Edwards Survey, Gregg County. Their objective is to try for production from a deeper sand that may exist at a much lower depth and east of the old shore line that causes the Woodbine sand to pinch out entirely along the full length of the east side of the East Texas field. This outpost is being drilled on acreage donated by the Gulf Production Company, Republic Production Company and Byrd & Frost, Inc., owners of a 16,000-acre block surrounding the location.

Tidal Oil Company's O. Whittington 1, located in the northwest corner of 39-acre lease, John Darley Survey, and in the northeast part of the Joiner area, has been equipped with a bottom hole choke in order to try and obtain a steady flow of oil. This edge well logged broken sand at 3582-3656 feet, with a total depth of 3720 feet in sandy-shale. The Texas Company's G. G. Turner 1, located on lease adjoining on the east, is standardizing to pump after failing to flow when completed some months ago.

Peyton Bros. et al's Perry 1, which was completed several weeks ago, making dry gas from the Woodbine sand horizon at a total depth of 3619 feet, was re-gauged late last week and flowed at rate of 40,000,000 cubic feet daily. This well is about three miles south of the nearest oil production in the East Texas field, and is the first in the entire area to yield only gas from the Woodbine. The actual rate of flow was near the 60,000,000 cubic foot daily mark with allowances made for back pressure on tubing and casing, temperature, and use of three-inch horizontal lead line from the well. This gas will be utilized in supplying fuel for the numerous rigs operating in the lower portion of the field, and will earn more revenue daily than is possible for the biggest oil well in the field. Stanolind Oil & Gas Company and Pure Oil Company's Ras Lacy 1, located about three-quarters of a mile southwest of the gasser, is drilling below 3475 feet in Austin chalk formation, with indication that a sharp dip in the structure has occurred between the two tests. Lacy 1 logged top of broken Pecan chalk at 2614 feet, and hard chalk at 2629 feet, with a surface elevation of 318 feet. Scouts have forecasted that this test will encounter the top of the Woodbine slightly

East Texas Production Report

Official data on proration enforcement in the East Texas field, as compiled each day by the military authorities, is listed below:

Period ending 7 a.m.	Total wells completed	Wells reporting prod.	Wells off prod.	Wells not reporting	Pipe line runs	Total production	Daily Avr. per well
January 18..	3835	842	2809	184	.....	83,023*	96.0
January 19..	3842	3598	146	98	274,783	361,130	100.2
January 20..	3852	3655	172	25	400,755	372,497	101.9
January 21..	3874	3697	90	85	396,390	366,997	99.2
January 22..	3883	3699	64	120	363,188	372,102	100.5
January 23..	3892	3713	77	102	343,916	371,896	100.1
January 24..	3904	3632	142	130	.....	368,837	99.9
January 25..	3907	876	2821	210	.....	86,176*	99.3

*Production off because of Sunday shut-down.

Note—Pipe line runs include receipts plus crude used as fuel and road oil and for washing in wells.

more than 3300 feet below sea level, but within a safe contour for oil production.

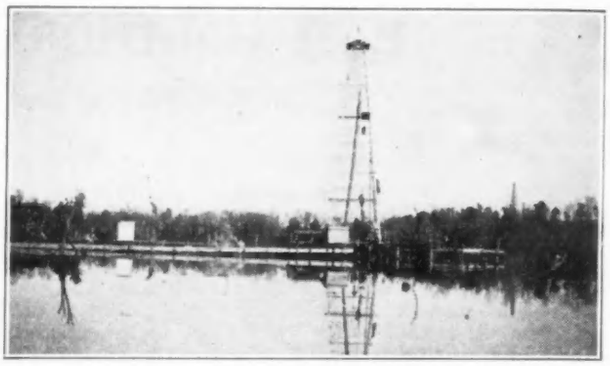
In Upshur County and on the extreme north end of the field, The California Petroleum Corporation of Venezuela's T. B. Stinchcomb 2 has been forced to drill close to the water level before encountering oil sand. This test is an east offset to Johnson et al's Hargraves 1 and a northeast offset to Sun Oil Company's Hargraves 2, which was completed recently as a light producer. Stinchcomb cored one foot into sand to a total depth of 3728 feet, and developed a hole full of oil when swabbed down. More sand is to be drilled before a production test is attempted.

Wildcat Four Miles North of East Texas Field Awaits Test

Longview, Texas.—Testing of Cranfill-Reynolds Company et al's wildcat semi-completed oil producer on the M. L. Rash 106-acre tract, E. N. Eubanks Survey, and about four miles north of nearest production in the East Texas field, has been postponed until later in the week after having drilled cement plug and installed a string of tubing over the past week-end. Additional title work on leases included in the drilling block is responsible for the new delay in having a showdown on the production possibilities of this important wildcat, which created attention November 15, when a drill stem test at 3728 feet yielded 2300 feet of 34 gravity oil in drill pipe. Pipe was then cemented on top of the sand, and operations suspended to clear up titles to the 5600-acre block held by the above company and a group of associates. Rash 1 is apparently on a separate structure from the big field to the south, having drilled to a sub-sea depth of 3399 feet without showing salt water, or considerably below the minus depth that the Woodbine sand can be tapped in the East Texas field without carrying water.

Pending the completion of the above wildcat, J. W. Love and associates' J. M. Bain 1, located about 3½ miles to the northwest and in the W. H. Williams Survey, have halted operations near the 3750-foot level. Bain 1 logged first broken Pecan chalk at 2465 feet, and the base at 2970 feet, with a surface elevation of 372 feet. The top of the Austin chalk was reported at 3686 feet. Following the same trend to the north is Stanolind Oil & Gas Company's wildcat on the A. Newsome tract, Calvin Anderson Survey, which logged Pecan chalk at 2420-2985 feet, with a surface elevation of 398 feet. This test encountered dry Blossom sand at 3201 feet, and early this week was drilling below 3300 feet. About five miles southwest of the latter wildcat, Jas. B. Dunigan of Breckenridge and others' D. F. Guest 1, located on 129-acre lease, B. Parker Survey, topped the Pecan chalk at 2467 feet, with a surface elevation of 376 feet, and early this week was drilling in chalk below 2900 feet.

Drilling is scheduled to be resumed on Pilot Oil Company and W. F. Snebold's J. W. Ray 1, located in the Kelsey dome area in southwestern Upshur County, after several weeks of idleness at 3360 feet. This wildcat logged Pecan chalk at 2380-2855 feet, and top of Blossom sand at 3243 feet, with a surface elevation of 403 feet. It is located about 1½ miles southeast of Amerada Petroleum Corporation's Wade 1, which was drilled to 6153 feet in 1929 before abandoning as a dry hole. Gillette-Tarr-Potter et al's D. A. Irions-Long 1, D. B. Lucas Survey, and about 1½ miles north of the deep failure, in the Kelsey dome area, was drilling below 2500 feet last week, with a surface elevation of 431 feet. Pilot Oil Company has acquired a one-fourth interest in the drilling block to be tested by Irions-Long 1 in order to play the dome from more than one side with lease protection.



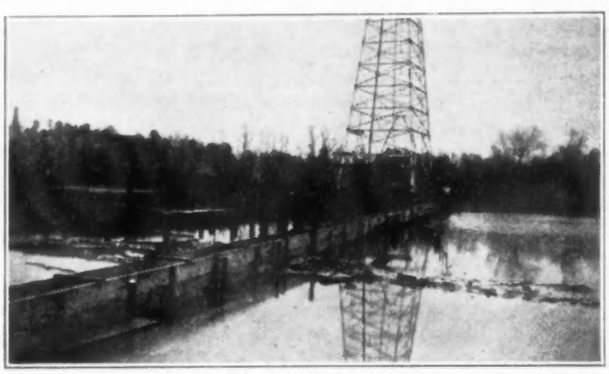
Tidal Employes Off-Shore Drilling Method on Lake Deverina Leasehold

Longview, Texas.—Application of off-shore drilling methods used in the Gulf Coast and California areas has been resorted to by Tidal Oil Company in launching a development program on its Lake Devernia 271-acre leasehold, occupying one of the most prolific sections of the East Texas field. The property includes a body of fresh water that covers more than half of the lease throughout the year, while during periods of excessive rainfall as has prevailed within the past six weeks some of the adjoining tracts share in the overflow. The depth of the lake ranges from a mud flat to a maximum of 25 feet, and because of being stocked with game fish to furnish recreation for members of the club, which owns the land in fee with royalty interests included, contamination of the water must be avoided.

Completion of Tidal Oil Company's Lake Deverina 2, which is the first of six or more proposed tests for the deep water section of the lease, is due by the end of the current week. Several months have been required to install concrete cellar, piling for derrick legs, bridges, etc., and to drill the hole with rotary to the top of the sand. However, it is expected that drilling time will be reduced on future tests.

A wooden bridge capable of supporting heavy trucks was constructed from the shore to Lake Devernia 2, a distance of about 200 feet. A pile driver was brought into play to sink nine 40-foot length creosoted poles about 30 feet below the bottom of the lake at each of the derrick corners. A 94-foot Parkersburg steel derrick rests on this piling, with the derrick floor two feet above flood stage of the lake.

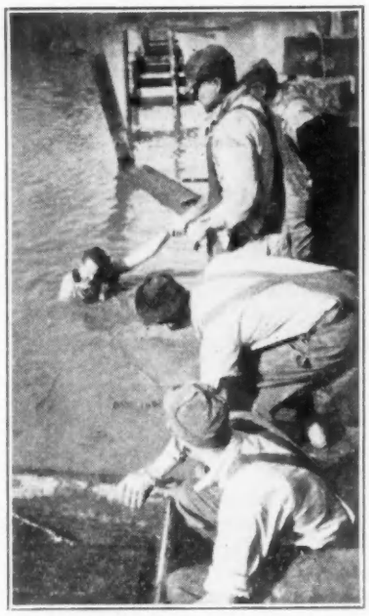
A turnkey contract was made with Fox Rig & Lumber Company to install piling, cellar and derrick, according



Showing wooden conduit used in returning rotary mud from derrick out in Lake Devernia to slush pit on bank, a distance of 208 feet.

to D. E. Legan, superintendent in charge of operations in the East Texas field for Tidal Oil Company. General Drilling Company drilled the well on contract.

The concrete cellar, built in the form of a cylinder, has a diameter of 11 feet, and a depth of 16 feet. The bottom rests about nine feet below the bed of the lake. The walls are made up of 18-inch reinforced concrete, while the bottom of the cellar has a thickness of two feet. Several joints of 20-inch casing serves as a conductor through the cellar for the surface pipe and oil string of casing.



Rig builders can pinch hit for divers, as evidenced by this member of a crew trying to retrieve a section of a derrick leg dropped to the bottom of a lake.

The two steam boilers for drilling, mud pits and pumps were spotted on the nearest shore. The steam lines and three-inch mud line extended out of the derrick on the bridge. Provisions were made for returning the drilling fluid from the derrick to the pits on the shore by means of a wooden conduit, having a depth and width of two feet. This conduit or trench was given a fall of about three feet in order to effect a gravity flow to the shore.

Lease storage tanks and separator have been installed on the shore as a precaution against possible contamination of the water from oil drippings.

Lake Devernia catches the water drainage from a 15,000-acre water shed that is entirely proven for oil production, and partially drilled. Recognizing the hazard that a wild oil well at any point on this large watershed would create, Legan has arranged for the erection of a fire guard around each of the completions made in the lake proper. Discarded tank plates will be joined and suspended into the water from a cable resting on posts. Such a guard will circle each location, and is intended to exclude any escaping oil from the water shed reaching the lake wells because of the fire hazard.

Van Deep Test Has Fishing Job With Core Barrel Stuck

Tyler, Texas.—Progress on the Van field's unit members' Trinity sand test on the V. T. Davis tract, located north of the productive limits of the Woodbine sand area, has been halted during the past week because of drill stem being stuck at 3960 feet while coming out of the hole with a core taken at the 6482-foot level. Pure Oil Company is in charge of this operation, and arrangements were made last week to apply muriatic acid as a means of freeing the stem and core barrel. Traces of oil had appeared in cores taken at the 6300 and 6385-foot levels. Pure Oil Company's D. F. Cade 1, located on 45.3-acre lease and in the southeast corner of lot 13, Nacogdoches County School Lands, is drilling ahead after cementing surface pipe. This test is several thousand feet northwest of the above test and cut off from the nearest production in the field by dry holes. The drilling of this outpost may be for the purpose of testing the shallow Nacatosh sand, and also for geological information. It is located on unitized acreage.

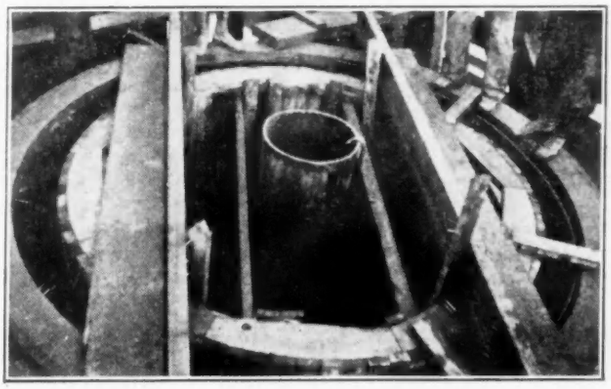
Shelby County, Texas Test Has Oil Show at 1495 Feet

Marshall, Texas.—Harry Elliott's Pickering Lumber Company test in the C. H. Patterson Survey, Shelby County, showed strong gas and enough oil to cover the pits last week at 1495 feet in chalk. This test is one-quarter mile east of Gulf Refining Company's successful well completed several years ago for 125 barrels. Gas in the Elliott well was so strong that baroids had to be pumped in to hold, pending securing of casing.

Kilgore.—Production in the East Texas field registered a slight gain this past Sunday as compared to previous Sabbaths, thereby indicating that the peak of the holiday observance has probably been reached. The field is credited with having produced 86,176 barrels from 876 wells reporting production out of a total of 3907 completions. However, actual production was greater as 210 wells failed to report to military authorities for this particular day.

Fort Worth, Texas.—J. Whitney Lewis, consulting geologist who is temporarily located at Dallas, Texas, delivered a talk with illustrations on the geology and petroleum possibilities in Cuba before members of the Fort Worth Geological Society at Fort Worth, January 18. Lewis recently concluded a long visit to the above tropical island in preparing a survey for a group of Eastern capitalists.

View of the bridge built out into lake to Tidal Oil Company's Lake Devernia 2, with Lee Morrison, rig builder, left, and Jess Springer, farm boss, in foreground.



Concrete cellar, with 20-inch casing in place to act as a conductor, installed for the drilling of Tidal Oil Company's Lake Devernia 2.

South Texas Field Developments

EARL POST, ***Staff Representative, San Antonio, Texas***

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Los Olmos Shallow Field To Receive 26 More Tests

San Antonio, Texas.—The Los Olmos shallow field, 12 miles north of Rio Grande City, Starr County, is to receive 26 more shallow wells to the 200 and 500-foot horizons, contracts having been signed during the past week for that number. The field is one of the most unusual ever opened in South Texas, inasmuch as wells at the very shallow depths show initial productions of as high as 125 barrels daily.

W. S. Frazier, Bennett Oil Company, Houston, announced the signing of a 20-well contract with drilling to commence not later than February 1. Bennett and Frazier recently completed a deal for about 1200 acres offsetting the pool on the west. Most of their property is located in Porcion 75, Jurisdiction of Camargo.

A contract for six tests was signed between H. H. Davis, Percey, Illinois, banker, and Keystone Drilling Company of Joplin, Missouri. Davis has a 30-acre tract offsetting the site of Rio 2 of Rio Oil & Gas Company on the north, part of the acreage being in Section 6, Porcion 76, and the remainder in Section 6, Porcion 75.

Los Olmos Oil & Gas Company owns about 3500 acres in the pool and drilled the discovery well. The company is now constructing storage facilities to care for the production of all its wells. It has completed five oil wells.

San Marcos Development Company, drilling on the Ivey lease on the south bank of Olmos Creek, in Porcion 75, completed Ivey 5 as a 15-barrel oil well at 215 feet. It was the first oil well to be completed by the company which is now selling over 200,000 cubic feet of natural gas production daily to Rio Grande Public Service Corporation from Iveys 2 and 4. Ivey 6 has been spudded in the northwest corner of the lease and on the east bank of Olmos Creek. It is expected to be completed within a week.

Rio Oil & Gas Company has spudded in Rio 3 on a 20-acre tract in the southeast corner of Section 6, Porcion 76. It is the easternmost location of the Los Olmos pool. Rio 2 was completed some time ago for an estimated 35 barrels per day in the center of the same section. Storage facilities are now being constructed.

La Joya Oil & Gas Company's La Joya 1, located in western Hidalgo County and three miles north of Sam Fordyce, is drilling in shale at 4000 feet.

Two More Producers Promised For Damac Section at Pettus

San Antonio, Texas.—Two more producers were in the process of completion in the Damac sector of the Pettus field, Bee County, during the past week, one of which promises an east extension. Houston Oil Company's Portis 3, A. Smalley Survey, 526 feet east of Portis 2, present east edge well, is one. Another well possibly will be drilled farther east. Slick-Seelingson's Ray 4, in the George Kerr Survey is to be drilled offsetting the Portis well on the north.

Slick-Seelingson's Ray 3, east offset to The Texas Company's Gremmel 1, in the western portion of the field, is also near completion. It also is in the George A. Kerr Survey.

The Texas Company is drilling at 2800 and 2200 feet respectively in its Gremmels 2 and 3, both in the John Pace Survey. Buck Oil Corporation is preparing to drill Ray 3, offsetting the Gremmel 2. McMurray et al's Ray 1, most westerly well in the field, is drilling around 3000 feet, while Davis et al's Ray 1, in the main sector of the pool, is starting up.

Farther south in the Normanna pool, also Bee County, C. F. Nichols' Hicks 2, discovery well of the pool, has been worked over and is a 75-barrel oil producer, making considerable gas. A 1¼-inch tubing was run inside of the 2½-inch tubing to total depth of 3641 feet. Hicks 1 showed for a gasser at slightly above 2000 feet. It is to be deepened to the regular horizon, where Hicks 2 is producing.

Test in Southwest Kerr County Excites Interest

San Antonio, Texas.—Evans and Gant and Eastland Oil Company's Jeff Love 2, 45 miles southwest of Kerrville, in Kerr County, is still a test of much speculation. The well, located 150 feet out of the southwest corner of Section 1593, recently found at 3835-39 feet, filling the hole 540 feet with oil.

During the week, Love 2 was bailed after casing was lowered to within 80 feet of the bottom of the hole. The well developed considerable water, some estimates being as high as 90 per cent with about 10 per cent oil. At the end of the week it had not been definitely determined whether the water was coming from the bottom of the hole, but it is believed that at least a part of it was coming from a higher sand at 3260 feet, which had not been shut off by the casing.

The well has been deepened to 5849 feet, steel line measurements. At that point the formation hardened and drilling was stopped to pull the casing and reset with a shoe in order to cut off all the water. After that drilling is to be resumed with no definite announcement as to what depth the well will be carried. The additional drilling failed to bring any increase in either the showing of oil or water.

Balcones Fault Test Is Failure in Edwards Lime

San Antonio, Texas.—One of the most interesting wildcats along the Balcones fault in South Texas in months was a failure in the Edwards lime, despite the fact that it showed the probable producing horizon unusually high.

It was W. M. Eiser's Wells 1, 2790 feet from the west line and 150 feet from the south line of the tract in the Mose de la Baume Survey, Guadalupe County. It is 2200 feet northwest of Grayburg Oil Company's Wells 1, which showed for a small producer in the Edwards lime. That Company then drilled a second well, Wells 2, farther southwest, which also showed a bit of oil in the Edwards.

The Eiser well topped the Austin chalk at 3445 feet; topped Eagleford, 3620 feet, topped Buda, 3648, topped

the Edwards lime at 3812 feet and cored to 3837 feet and on January 25 was coring to the contract depth to be reached at 3862 feet. The formation was tight and hard as flint, showing nothing. Figuring elevations, the Eiser well hit the Edwards about 132 feet higher than the Wells 1, which logged the top of the chalk at 3495 feet, top of the Edwards at 3897 feet. The Wells 2 got the chalk at 3557 feet and the top of the Edwards at 3945 feet.

As a result of the log of the Eiser well, considerable speculation was brought about along the Guadalupe-Gonzales strip, the majority of the trading being in royalties.

Government Wells Field Test Is a Gasser With Oil Spray

San Antonio, Texas.—After working over, Duval Oil Corporation has succeeded in completing its Bishop Cattle Company 7, Survey 135, Government Wells field, as a gasser spraying 100 barrels of oil through one-fourth-inch choke. It topped the first sand at 2310 feet and was sunk to a total depth of 2360 feet. where it was completed as a gasser. It was later converted into an oil producer.

Thomas and Tarver's Bishop Cattle Company 5, Survey 135, same field, was at last reports below 1700 feet.

Wolcot and Rehmet have taken over the lease on a block of 5000 acres 6½ miles northwest of San Diego, in Duval County. It is known as the Maxwell Rogers ranch, owned in fee by Archie Parr. R. A. Thompson is drilling the well at 1395 feet. It is on the San Andres Grant.

San Antonio, Texas.—V. G. Schimmel's F. A. Hale 1, located in the northwest quarter of Survey 63, Three Rivers Ranch Subdivision, McMullen County, showed about 8,000,000 cubic feet of gas in the Cole sand at 370-82 feet. The pressure was estimated at 200 pounds. A 10-inch casing has been set to cement off this showing and drilling will be continued to the Pettus sand. This well is 14 miles southwest of Callahan.

San Antonio, Texas.—A slight decline was showing in activity in the Escobas area of Zapata County during the past week. F. H. Etheridge's Jose Bustamante 5 is flowing 100 barrels from 1469-73 feet. Winch and Billings' Bustamante 1, deepened from the 1300-foot pay, is a 150-barrel producer at 1456-58 feet. Several more wells are in process of completion.

San Antonio, Texas.—Officials of Rio Grande Public Service Corporation, which now serves Rio Grande City with natural gas, announced this week the piping of gas to Fort Ringgold, the Upper Valley's famous army post of pre-Civil War days. The same officials intimated that the firm is considering the piping of gas into at least some cities of the Lower Rio Grande Valley from the shallow Los Olmos gas pool, Starr County.

San Antonio, Texas.—Rips Pipe and Sales Supply Company, Houston has established a warehouse branch at Rio Grande City to serve the operations in the Los Olmos shallow oil district, Starr County. Ed and William Rips, of the concern, were in that city last week to select the site. This sector of South Texas has been receiving considerable activity. This company is the first to enter the district with a supply house.

*—Page 68

Important Discoveries of 1931 Point to Active Year in 1932

San Antonio, Texas.—More than a score of important discoveries featured South Texas activity during 1931 and indicate several active drilling campaigns during 1932. The interesting feature of 1931 discoveries was that a number of deep horizons were uncovered in already producing fields.

The "hot spots" of 1932, if present indications mean anything, will be on the new Refugio-Victoria-Calhoun trend, Kerr-Real sector of Edwards Plateau, lower Mirando district, and the Damac extension of the Pettus field in Bee County.

As the year closed, two important discoveries were recorded in northeast Refugio and southwest Victoria Counties. Humble Oil & Refining Company got a producer in Refugio at 4127-55 feet, while The Texas Company started the New Year off by bringing in a Victoria County 750 to 1000-barrel well at 5828-32 feet. A producing strip 10 miles long, running northeast and southwest, with one-half dozen oil and gas horizons, has been virtually proven. The district is well blocked and a play is practically assured.

Further interest is created in Victoria County by C. R. & M. Drilling Company and C. B. Bunte, Inc.'s strike in C. R. Kerran 1, which showed 600 pounds pressure on a drill stem test in five minutes through one fourth-inch chokes. The well also showed oil. The sand was logged at 5182-91 feet. It is the Martin de Leon Grant, 10 miles northeast of McFadden on a down dip and likely does not connect up with the McFadden area, but opens a new pool.

The Damac zone of the Pettus field is receiving a drilling campaign on offset locations over an area of one mile. Small tracts account for a great deal of activity. The same is the case in the Escobas area of Zapata County. Several strip leases, large enough for about 10 wells each, create the necessity for the drilling of many offsets. Inexpensive drilling to a 1450-foot sand also boosts interest in drilling there.

One of the most important areas during 1932 undoubtedly will be in the Kerr-Real sector of the Edwards Plateau. Evans and Gant and Eastland Oil Company's Jeff Love 2, Section 1592, is standing full of oil at 5835-39 feet and preparations are being made to complete. It is said to be in the Mississippian. This area was in the limelight at the beginning of 1931 following the showing in Jeff Love 1 at 3200 feet, but commercial production could not be developed. There is no production within 100 miles of this well in any direction and its discovery is of vital importance. Six wells have been drilled in the immediate area, but none of them went as deep as this test.

Record Depth Well Producing Gas From 6038-6077-Foot Horizon

Cement, Oklahoma.—Mid-Kansas Oil & Gas Company and Ramsey Petroleum Corporation's Preston Culp 6,* NW NW NE Section 6-5n-9w, holder of the depth record for the United States, is now producing gas at the rate of about 11,000,000 cubic feet and 22 barrels of fluid cutting b.s. and mud from sand originally cored from 6038 to 6077 feet. According to operators this was the best looking sand encountered in drilling the test to the record total depth of 10,079 feet.

Preston Culp 6 has now been plugged back four times testing by stages the best showings as indicated by the core bit. It is reported that a collar was bursted to test the formation at the present depth and that the formation has not yet been shot. Other showings have been tested by shooting the casing with 100 quarts or more and it is probable that a fairly heavy shot will materially increase the present show.

Gulf Coast Field Developments

JACK LOGAN, ***Staff Representative, Houston, Texas***

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Manvel Discovery Performance Gives Good Promise for Field

Houston.—The Texas Company's Belcher 1, discovery and only producing well of the Manvel field, Brazoria County, has furnished indication in its production history that the new field will prove to be one of considerable importance, with possibilities for worth-while profits for the above company, which holds leases covering a high percentage of promising acreage.

At the beginning of this week, approximately 3½ months after its completion, September 9, 1931, the well had produced approximately 85,000 barrels of oil, and it gives indication that it still has a long production life ahead, as it continues flowing from 400 to 500 barrels net oil daily, through a 5/16-inch choke, with the relatively high pressure of nearly 1600 pounds on the tubing and over 250 pounds on the casing.

Production from the well is 28 gravity oil, which has a market value of 74 cents per barrel. The 85,000 barrels already produced, figured upon that current price, would be worth $62,900, and with the well still flowing, it promises to establish itself clearly as a profitable well, even under the depressed market conditions. While the oil sand is relatively deep, the total depth of the discovery well being 5481 feet, wells of similar depth in proven fields of the Gulf Coast are ordinarily completed and fully equipped for approximately $50,000, including the pumping equipment installed after the well ceases flowing.

The Manvel field discovery well is yielding around 30 per cent b.s. and water along with the oil, but this fact is not causing alarm, the well having developed some water intrusion shortly after completion, and having produced the water and sediment at about the present rate over a considerable period.

Houston.—The Texas Company's Belcher 2, the first well to be drilled since discovery of Manvel field in Brazoria County, September 9, 1931, was drilling in sand and lime at 4250 feet January 24, about 1200 feet above the depth at which commercial oil was produced from Belcher 1. From now until completion or abandonment the well will be closely watched. Its successful completion would constitute an extension of 1000 feet southwest for Manvel field.

Barbers Hill Most Active Field in Texas Gulf Coast

Houston.—With 14 active drilling operations under way, Barbers Hill field is due to hold the record for January of being the most active field in the Texas Gulf Coast.

Of the 14, a number have reached depths near the various producing horizons. These should be listed as completions early in February. The Texas Company's Lawrence Fee 2, showing oil in a hard sandy shale at 5303-5309 feet, probably will be tested for production in the next few days.

During the past week two wells with an aggregate initial production of 4260 barrels were completed at Barbers Hill. Texas Gulf Producing Company's J. M. Fitzgerald 1 produced 2160 barrels flush oil through a 9/16-inch choke from a total depth of 5263 feet, thereby extending the northeast flank production of the field 350 feet southeast. Mills Bennett's Gulf-Fisher 5 yielded an initial production of 2100 barrels of pipe line oil from 4407 feet.

Moss Bluff Field Adds Another Abandonment

Houston.—Developments at Moss Bluff field, Liberty County, this week were featured by abandonment of Gulf Production Company's McFaddin A-4 at 7375 feet after sticking the core drill and backing off the drill stem, one more misfortune added to the long list that has thus far prevented the field from taking its place among profitable ones of the Texas Gulf Coast.

McFaddin A-4, a relatively deep test for the Gulf Coast, encountered a broken formation of sand and shale and oil sand at 5989-6008 feet. One joint of screen was set to test the gap for production, but the well swabbed salt water, and the screen was pulled to deepen it.

Northeast Grimes County West of Iola Gets Test

Houston.—Barnett et al are rigging up on G. W. Dodd 1, a wildcat test west of Iola, in Grimes County, on a location 280 feet north of Cobb's Dodd 1. The test is in the Dodd 150-acre tract, northeast part of the county.

Rianjo Oil Company, which abandoned a wildcat at 3550 feet on the Cuthrell land in the Pat O'Connor Survey early in the month, has drilled past 850 feet in another carlos dome prospect called Cuthrell 2, located 150 feet south and 150 feet east of Cuthrell 1.

Stanolind Oil and Gas Company's Mary Sullivan 1, located north and east of Plantersville, in Grimes County, in the Asa Yeamans Survey, is a location.

Texas Gulf Producing Company Organization Is Announced

Houston.—Texas Gulf Producing Company, recently chartered under the laws of Delaware and listing as principal assets production developed by Nat Hunter Producing Company in East Texas and by Humphreys Corporation, issued details of organization January 26.

Under the corporate structure arrangement O. R. Seagraves is chairman of the board, with William F. Morgan, W. L. Moody III, N. W. Hunter, Henry M. Brown, S. A. Judson and Frank R. Williams forming the balance of the directorate. N. W. Hunter, formerly president of the producing company bearing his name and nephew of O. R. Seagraves, is president of the new company.

Immediate plans of Texas Gulf Producing Company call for initial issuance of 200,000 no par common stock shares of the 2,000,000 no par shares authorized. Issuance of the 200,000 share is to be followed by issuance later of 400,000, making the total issue equivalent to the 600,000 shares already outstanding.

Value of Barbers Hill and East Texas properties held

by Texas Gulf Producing Company was placed at $11,087,773 September 1, 1931. Average production from these properties the last four months of 1931 was about 6796 barrels per day, each barrel of which, if it could be figured on a basis of settled production, has been valued at a figure in excess of $1600.

At Barbers Hill field the company owns full working interest in 561.2 acres, three-quarter working interest in 14.5 acres, and half working interest in 2.5 acres. There are 29 producing wells on these acres, three drilling, and locations available for 44 more. In East Texas field the company owns full working interest in 71.99 acres and half working interest in 63.22 acres. Eleven flowing wells are on the East Texas properties.

Wildcat property of the company includes 5000 acres held under Texas permits and oil and gas leases in Franklin County, Mississippi.

Houston.—Conditions in Pure Oil Company's Mayes 14, Lost Lake field, Chambers County, which last week revealed a new shallow sand on the east side of the dome, indicated commercial production will be obtained therefrom. A solid string of 9⅝-inch will be set, the bottom 60 feet of which will be screen to insert in the sand which extends from 1812 to 1873 feet.

Mayes 14 is an outpost well, being 650 feet east of Mayes 11, one of the 2830-foot horizon producers.

Houston.—Fort Worth Development Company has erected a derrick for O. M. Todd 1 in the Cheek dome district of Jefferson County on a site 200 varas south and 58 varas east of the northwest corner of the William Carr Survey, making the location of the new wildcat approximately two miles northwest of Nelson 1, abandoned last year by Humble Oil & Refining Company after it had been drilled into a shale at 6537 feet. Cheek dome has not been proven for oil.

Jackson Gas Field Is Extended Half-Mile North

Jackson, Mississippi.—James Alexander, trustee, extended the gas producing area of the Jackson field almost a half mile north when his Hurst 1, NE NE Section 12-5-1e, Rankin County, was completed for 52,560,000 cubic feet, making it one of the largest in the field.

Anderson and Orr's Casey and associates 1, Section 11-5-1e, as completed in the southwest part of the field for 40,000,000 feet; total depth is 2403 feet; elevation is 265.1 feet. Black shale was topped at 2306 feet and chalk at 2395 feet.

One new location, a wildcat, United Gas Public Service Company's Lenhart 1, was announced for Sharkey County, in the delta section, located on a block of 60,000 acres which includes a block formed in 1928 by J. P. Evans, Shreveport, later turned to The Texas Company for 50 cents per acre.

Meridian, Miss.—Ramsey Petroleum Company, Oklahoma City, is renewing all its leases in a large block of acreage on the Jackson fault in Clarke County, Alabama, which are expiring, but negotiations between this company and Danciger Oil & Refining Company in which it was planned to have the latter drill the acreage for the former company, are being held up pending litigation.

LOUISIANA-ARKANSAS

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Floods Continue to Hold 100 Arkansas Wells Idle

El Dorado, Arkansas.—Floods continued to hold about 100 wells off production in Arkansas last week, an improvement of 50 per cent from the week before. Lion Oil Refining Company's deep test in Union County is still shut down at 7255 feet in salt, to resume when floods permit. Only one wildcat was active in the state, Stephens and associates' Dierks 1, Little River County, is drilling below 2217 feet. No wells were completed or started in Arkansas during the week.

Salt Water Trouble Again Besets 4400-Foot Zwolle Test

Shreveport.—Salt water trouble again last week appeared in Loring Oil Company's Bowman-Hicks 18, SW NW Section 15-7-12, a 4400-foot test at Zwolle. A fortnight ago this test had 175 sacks of cement set under pressure to shut off salt water from 34 feet of sand at 4300-34 feet, above broken oolitic lime of the lower Cretaceous which showed gas at 4378 feet. Last week operators used 1000 sacks of cement to shut off the salt water from this horizon after drilling to 4428 feet. Lower Cretaceous was logged at 4000 feet; elevation is 264.1 feet.

R. L. Gay, Trustee's Long-Bell A-1, NW NW Section 10-8-13 (logged Glen Rose, 4220 feet), is drilling below 4500 feet.

Sabine Parish Test Shows For Oil at 2097-Foot Level

Shreveport.—Coats Petroleum Company's Parie 1, NE SE Section 2-7-13, Sabine Parish, showed 2,000,000 feet dry gas with heavy spray of oil at 2097 feet; when carried to 2179 feet it tested dry in Zwolle chalk.

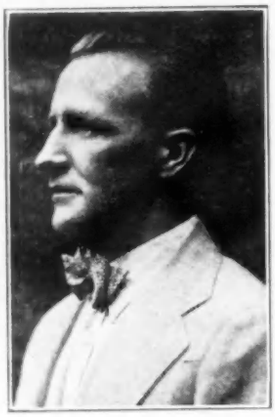
Baird Brothers-McGuffin's Bush 1, Section 1-7-11, southwestern Zwolle, swabbed 50 barrels daily at 2593 feet. H. W. Perritt's Bowman-Hicks 6, Section 2-7-12, was completed in chalk at 2317 feet, pumping 20 barrels daily.

Zwolle now has 36 operations including outside tests of which eight are drilling, six are standardized, three are derricks, three are rigs, one is bailing, one is cementing off salt water, three are waiting casing, eight are shut down, and the remainder are locations.

Shreveport.—Four locations were announced for Louisiana last week, two in Zwolle and two in North Louisiana. They are: Mansfield Hardwood Lumber Company's Fee 1, SE SE Section 36-8-13; Ohio Oil Company's Bowman-Hicks 14, NW SW Section 3-7-12, in the Zwolle section; in North Louisiana: Calatex Oil & Gas Company's Hudson 1, Section 8-16-16, Caddo side of Panola gas field; and A. A. Tuntin's Nickie 1, Section 7-13-12, DeSoto Parish.

Shreveport.—H. I. Morgan and associates' Smith 1, Section 22-19-11, on the southwest flank of the Bellevue structure, Bossier Parish, was completed last week in the upper Trinity at 1770 feet, gauging 16,803,200 cubic feet of gas with rock pressure of 710 pounds. Sand was topped at 1758 feet where six-inch casing was cemented. This test had previously shown an estimated 25,000,000 cubic feet of gas in a drill stem test.

W. B. Summers



W. A. Sawton

E. G. Lenzner

R. E. Zint

Oil Equipment and Engineering Exposition

A CHANGE in personnel has been announced for the Oil Equipment and Engineering Exposition which will hold its third annual from March 21 to 28, 1932, at Alameda Boulevard and 131st Street, Los Angeles. E. G. Lenzner, who was formerly general manager, is now the president and general manager of the organization. He was the originator and founder of the enterprise and put on the first show at the Shrine auditorium, 1930. During the following year he erected the present buildings at which the second annual Oil Equipment and Engineering Exposition was held.

R. E. Zint is now vice-president and sales manager. After graduating from Oakland City College in Indiana he came to California and took up postgraduate work in the University of Southern California. After that he taught for two years and then went with H. C. Smith Corporation where he was employed for seven years. At the time of leaving that organization he was secretary and sales manager and then went with Globe Oil Tool Company as sales manager. Before joining the exposition he held the same position with Crum Brainard Company.

Another addition is W. B. Summers who is secretary and business manager. He came to California from the University of Saskatchewan and held the office of secretary and treasurer of Lorraine Corporation for six years. Leaving that company in 1929 he entered the printing and publishing business in which he has been engaged for the last two years.

Still "Carrying On"

Officers for 1932:

President
J. C. YOUNG
Tidal Oil Co.

Vice President
ARTHUR ODELL
Barnsdall Oil Co.

Secretary-Treasurer
IRA G. CLARK
Gypsy Oil Co.

For the past nine years the Petroleum Industry has earned the position of leadership in accident prevention work, through the cooperation of the companies operating in this area.

While the present economic conditions necessitate a change in the work, it is to be continued by voluntary effort. Your sincere cooperation and moral support will assure the continuation of our present desirable accident experience.

DON J. WALLACE
Retiring Director

Mid-Continent Safety Council

Tulsa, Oklahoma

INTERNATIONAL PETROLEUM IN REVIEW

ROY E. LEIGH, *Foreign Editor, New York*

Germany Plans to Reduce Oil Imports

Berlin.—Governmental authorities are said to favor a proposal to establish a monopoly of the German market in favor of a uniform type of motor fuel, to consist of 50 per cent of gasoline mixed with 50 per cent of benzol, grain alcohol, and wood alcohol.

This is recognized as an outgrowth of the proposal of the I. G. Farbenindustrie, which sought governmental assurance and protection as a basis for the expansion of its refinery handling crude oil produced from the new field in Thuringia and of its plant for the production of oil from coal.

Reports current in New York are to the effect that Soviet representatives in Berlin have sought to have incorporated into the project a requirement that preference be given to Russian gasoline, insofar as imports may be necessary, as a feature of Russo-German trade relations.

King of Mene Grande Goes on Holiday

A recent issue of The Maracaibo Herald contains an interesting and well-written account of the recent sailing from that port of His Majesty, Ari I, King of Mene Grande, who was honored by a farewell banquet of magnificent proportions tendered by his loyal subjects and admirers on occasion of his departure for a holiday in Europe.

His Highness, who has served for six years as field superintendent, for Caribbean Petroleum Company at Mene Grande, is travelling incognito under the name of A. van der Heiden.

Roumanian Production Increased During 1931

New York. — Teleghaphic advices from Bucharest quote a preliminary figure of 47,390,000 barrels as representative of Roumanian crude oil production during the calendar year 1931. This compares with a total of 41,680,000 barrels during the year 1930, and shows an increase of about 13 2-3 per cent.

Petroleum Refineries In Foreign Countries

Washington, D. C.—The Bureau of Foreign and Domestic Commerce, announces a revision of Trade Information Bulletin No. 784, "Petroleum Refineries in Foreign Countries, 1931," which contains valuable data regarding the number and ownership of petroleum refineries abroad, total output and production of individual plants, and methods of processing aboard, which will be of practical interest to all exporters of petroleum products as well as to students of world affairs in petroleum.

The bureau reports that the number of foreign petroleum refineries has steadily increased in recent years, a development which has been accompanied by substantial improvement in refinery technology.

Copies may be had from the Superintendent of Documents or the Bureau of Foreign and Domestic Commerce, and at the district offices of the bureau at New York, Houston, St. Louis, Los Angeles, Chicago, and 29 other principal cities of the United States, at a price of 10 cents each.

Mexican Production And Export Taxes

New York.—The Association of Producers of Petroleum in Mexico has received a telegraphic report from Mexico City to the effect that values of petroleum products have been fixed as follows for the computation of production taxes accruing during the month of January, calculations being based on silver exchange at 2.5743:

Fuel Oil	77.69 cents per barrel
Gasoline	7.8 cents per gallon
Kerosene	6.75 cents per gallon

Production taxes will be payable as follows:

	Tax per Cubic Meter (silver)	Tax in U. S. Currency
Crude (sp. gr. 0.93 = Be. 20.38)	1.450 pesos	$0.08955 per bbl.
Crude (sp. gr. 0.96 = Be. 15.68) or heavier	.820 pesos	.05064 per bbl.
Fuel Oil (sp. gr. 0.95 = Be. 17.21)	1.260 pesos	.07781 per bbl.
Gasoline (crude)	2.122 pesos	.00312 per gal.
Gasoline (refined)	1.061 pesos	.00156 per gal.
Kerosene (crude)	2.754 pesos	.00405 per gal.
Kerosene (refined)	1.377 pesos	.00203 per gal.

The production tax on fuel oil will vary approximately .00638 per barrel for each degree of specific gravity above (deduct) or below (add) 0.95 specific gravity.

The production tax on light crude will vary approximately .00734 per barrel for each degree of specific gravity above (deduct) or below (add) 0.93 specific gravity.

(NOTE: As export taxes are payable in silver at par, to make calculations in United States ccurrency, take figures given below, multiply them by two and divide by rate of exchange at time of payment.)

	U. S. Currency ($1.00 for 2 pesos)
Crude (sp. gr. 0.93 = Be. 20.38)	$0.07949 per bbl.
Crude (sp. gr. 0.96 = Be. 15.68) or heavier	.04928 per bbl.
Fuel Oil (sp. gr. 0.95 = Be. 17.21)	.05962 per bbl.
Gasoline (crude)	.00472 per gal.
Gasoline (refined	.00189 per gal.
Kerosene (crude)	.00151 per gal.
Kerosene (refined)	.00057 per gal.

Mexican Production For December

Mexico City.—The Ministry of Industry, Commerce, and Labor reports that crude oil production of the Republic totaled 2,654,254 barrels during the month of December, according to preliminary figures. This total includes 1,599,144 barrels of light oil and 1,055,110 barrels of heavy oil.

Exports of crude and its derivatives totaled 1,830,705 barrels during the same period.

To Drill In Lake Huron

New York.—Canadian interests are preparing to drill a series of four wildcat tests on Manitoulin Island, in Lake Huron, where small quanities of oil were found about 30 years ago.

Completions for Past Week in U. S. Fields

▼ ▼ ▼

TEXAS

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
JOINER AREA—		
Arrow Drilling Co. et al, Will Rollins (77-ac) 1	7500	3655
Gulf Prod. Co., A. H. Radford 1	6500	3711
G. A. Turner (199-ac) 1	3000	3829
W. B. Hamilton et al, L. A. Gambrell (54-ac) 4	11,000	3689
Humble O&R Co., J. E. Arnold (43-ac) 1	7200	3720
W. A. Mullikin (166.4-ac) 10	7700	3788
J. H. Silvey (100-ac) 5-A	13,000	3700
Mid-Kansas O&G Co., R. G. Mason (104-ac) 3	6500	3650
J. M. Price (55-ac) 1	6500	3666
Arch Page et al, J. D. Florey 1	7000	3817
Stanolind O&G Co., T. O. Mason 1	5500	3650
The Texas Co., J. M. Price (90-ac) 1	9500	3652
Texas Trading Co., T. O. Mason 1	8000	3654
Tidal Oil Co., O. Whittington (39-ac) 1	1000	3720
KILGORE AREA—		
Devonian Oil Co.-Gulf Prod. Co., R. A. Motley 11	9500	3763
Empire Gas & Fuel Co., C. O. Christian (103-ac) 5	9000	3775
Gulf Prod. Co., C. Brown (60-ac) 2	12,500	3557
C. E. Christian (99-ac) 4-B	3500	3646
G. W. Culver 3	9500	3558
Houston Oil Co., S. S. Laird (70½-ac) 3	9200	3676
Humble O&R Co., Ben Peterson (50-ac) 1	8800	3648
N. V. Kinsey et al, B. Laird (25-ac) 1	7500	3570
Louisiana Oil Ref. Corp.-J. I. Roberts Prod. Co., W. C. Griffin (71-ac) 1	10,000	3566
Lewis Prod. Co., W. D. Peterson 1	7500	3650
Navarro Oil Co., E. G. Green (23-ac) 1	10,000	3575
A. G. Oliphant & Devonian Oil Co., W. P. Moore-Shell (98-ac) 1	9000	3748
Shell Pet. Corp., J. S. King (62½-ac) 4	8000	3644
W. P. Moore 6	9500	3726
J. B. Watson (285-ac) 14	10,000	3669
Steen Drlg. Co., Inc., W. D. Lacy-Shell (45-ac) 3	7700	3666
Sun Oil Co., C. H. Hilburn-Loyd (133.7-ac) 12	8000	3698
The Texas Co., J. M. Dickson (88.4-ac) 4	10,000	3591
Tidal Oil Co., E. R. D. Bivens (200-ac) 3	15,000	3637
W. C. Turnbow et al, H. T. Elder 2	10,500	3600
J. H. Turner-Gandy & Kinsey, I. Benson (4-ac) 1	7000	3619
Ward Oil Corp. et al, J. R. Beall (79-ac) 3	8000	3727
R. L. Wheelock & Collins, Wm. Clayton (73-ac) 1	8000	3525
LONGVIEW AREA—		
Alco Royalty Corp., King 2-A	15,000	3629
Amerada Pet. Corp., D. B. McPherson (40-ac) 3	12,000	3534
Arkansas Fuel Oil Co., M. Christian (19⅛-ac) 2	10,000	3626
Atlantic Oil Prod. Co., H. L. Foster (31-ac) 1	11,000	3630
Barnsdall Oil Co.-Sun Oil Co., L. Bingham 4	10,000	3560
Bonds & Gillespie, K. K. Johnson (10-ac) 1	7000	3604
Continental Oil Co., W. T. Todd (40-ac) 3	15,000	3585
Cox & Jake Hamon, Jr., Fee (73-ac) 4	9500	3580
Ellis & Dumas Pet. Co., Wells 3	12,000	3685
Empire Gas & Fuel Co., J. W. Akin (100-ac) 4	7500	3593

For Tabulation and Comparison See Market Section

Company, Well and Location	Initial Production Bbls.	Depth
Glasscock Bros. et al, Church 1	11,000	3509
Humble O&R Co., A. Carter (90-ac) 6	10,000	3656
W. R. Hughes (185-ac) 3	5000	3700
O'Byrne 1-B	6000	3677
H. M. Reeves-Cohen (28-ac) 3	7000	3666
Magnolia Pet. Co., L. J. Everett (171.1-ac) 10	10,000	3677
J. H. Massie et al, M. Fenn (28-ac) 3	8500	3627
Katherine Ryan & Hobson, G. S. Mattox (10-ac) 1	9000	3635
Sells Petroleum, Inc., R. Fisher (63-ac) 2	10,000	3585
Shell Pet. Corp., J. W. Akin (100-ac) 2	8600	3591
G. Jones (50-ac) 3	10,500	3595
Simms Oil Co., Bob Woods (100-ac) 1	9000	3540
Sun Oil Co., J. W. Akin (166.2-ac) 5	9200	3548
Allen Tooke (80-ac) 1-B	8500	3560
Superior Oil Co., L. C. Ingram (160-ac) 8	9000	3578
Sutton & Hawkins, J. A. Whittaker (26-ac) 3	11,000	3540
Tidal Oil Co., W. E. Jones (80-ac) 3	10,000	3652
E. M. Nettleton (48-ac)4, Lse. 2	10,000	3500
A. F. Sheppard (114-ac) 5	10,500	3654
L. H. Wentz et al, G. W. Richey (21ac) 2	7500	3565
J. A. Wood et al, Sanders 1	13,000	3656
SOUTH TEXAS		
BEE COUNTY—		
C. F. Nichols' Hicks 2 (wo)	75	3641
BEXAR COUNTY—		
Alamo Nat'l Gas Co.'s Gembler 2	¶1	710
DUVAL COUNTY—		
Duval Oil Corp.'s Bishop Cattle Co. 7	100	2360
GOLIAD COUNTY—		
Camp & Stanolind O&G Co.'s Pettus 3	*	4492
GUADALUPE COUNTY—		
J. M. Scott's Drumm 1	*	....
LA SALLE COUNTY—		
Buckley Ranch O&G Co.'s Buckley 1	*	5205
LIVE OAK COUNTY—		
V. G. Schimmel's Terrell 2	*	1610
WEBB COUNTY—		
Harris, Hayes & Newton's Laurel 1	*	2504
ZAPATA COUNTY—		
F. H. Etheridge's Bustamante 5	100	1473
Grayburg Oil Co.'s Martinez 1	*	2309
Winch & Billings' Bustamante 1	150	1458
TEXAS GULF COAST		
BARBERS HILL—		
Mills Bennett, Gulf-Fisher 1	2100	4407
Texas Gulf Producing Co., J. M. Fitzgerald 1	2160	5263
DAVIS HILL—		
Hamm et al, Harvard 1	*	1015
ESPERSON—		
Cranfill- & Reynolds, Davis 7	*	6300
MARKHAM—		
Duval Texas Sulphur Co., Smith 1	*	1825
MOSS BLUFF—		
Gulf Prod. Co., McFadden A-4	*	7375
SARATOGA—		
Rio Bravo Oil Co., Cotton 126-A	15	520

NORTH TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
ARCHER COUNTY—		
Geo. Alexander, Jr., et al, J. A. Wood 1	*	1402
Bridwell Oil Co., Oil Investment Co. 21	50	1495
F. P. Cullum et al, Logan 1	85	1161
Schultz & Weaver, Green 7	30	1134
Jack Story et al, Young & Langford 1	*	2320
JACK COUNTY—		
The Ascot Co., Maxey 1-A	*	1412
MONTAGUE COUNTY—		
Bridwell Oil Co., Brown 1	300	1251
WICHITA COUNTY—		
C. W. Clark et al, Allen & Kemp 2-A	225	1055
Geo. Proctor et al, Foster & Allen 1	*	642
United Producers Co., Allen & Kemp 4	*	1832
WILBARGER COUNTY—		
John O'Neil et al, Yarbrough 1	*	1562
YOUNG COUNTY—		
Coleman et al's Truehart 1	*	495
Degener & Co., Inc., Foster 1	*	496
King Royalty Co. & Phillips Pet. Co., Larimore 34	125	702
King Royalty Co. et al, Lowe (Sec. 59) 1,	*	902
J. D. Nix et al, Bailey (Sec. 165) 1	*	911
Petroleum Producers Co. et al, Deitrich 7	25	1132
Terrell-Willis et al, Choate 1	*	727
R. J. Watson et al, Watson (Sec. 249) 9	20	703
Wooten & Reed, V. Swain (Sec. 1465) 1	35	706
CENTRAL WEST TEXAS		
BROWN COUNTY—		
H. P. Evans et al, Mrs. H. J. Tervooen 1	*	985
COLEMAN COUNTY—		
Jamison-Pollard & Forester, J. M. Witcher 1	*	1920
SHACKELFORD COUNTY—		
Geo. Callahan et al, W. R. Biggs 1	10	693
L. Heck et al, Dodson 1	*	717
F. C. Walker et al, L. H. Hill 1	15	705
WEST TEXAS		
CRANE COUNTY—		
Gulf Prod. Co., Crier-McElroy 8	400	2898
UPTON COUNTY—		
Texas Pacific Coal & Oil Co., Lane 1-C	180	2342
WARD COUNTY—		
Stanolind O&G Co., E. H. Brown 1	¶2-20	2762
TEXAS PANHANDLE		
GRAY COUNTY—		
Mid-Kansas O&G Co., Carpenter 1	¶41	2218
Prairie O&G Co., Morse 1	85	2705
Quick Sand Oil Co., Chapman 1	225	2692
Vulcan Corp., Carpenter 1	¶5-2	2992
HUTCHINSON COUNTY—		
Skelly Oil Co., Johnson (Sec. 30) 1	¶3-5	3140
MOORE COUNTY—		
Texoma Nat'l Gas Co., R. S. Coon 2-M	¶6	3251

NORTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
SABINE PARISH (Zwolle)—		
H. W. Perritt, Bowman-Hicks 6, 2-7-12	20	2317

MISSISSIPPI

Company, Well and Location	Initial Production Bbls.	Depth
RANKIN COUNTY (Jackson)—		
James Alexander, Tr., Hurst 1, 12-5-1e	¶52	2348
Anderson & Orr, Casey et al 1, 11-5-1e	¶40	2403

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
DOMINGUEZ—		
Union Oil Co., Hellman 11	4500	4879
Callender 20	3000	4873
ELWOOD—		
Elwood Exploration Co., No. 90-7	350	3289
LONG BEACH—		
Duncomb Oil and Gas Co., Conduster 2	100	5348

OKLAHOMA

BRYAN COUNTY—		
M. A. Neff et al, Farris 2, nw c se 29-6s-7e	*	950
CARTER COUNTY—		
Don Phillips et al, Lyles 1, se sw ne 28-2s-2w	*	1704
CREEK COUNTY—		
Bryan Pet. Co. et al, Fulsom 1, nw c ne se 32-17-11e	¶½	526
Gled Oil Co., Reade 2, sw c se sw 25-19-8e	¶1	2198
Bryan Pet. Co., Boyd 1, nw c 28-19-9e	35	2101
Jake Glen et al, Miller 1, ne c nw sw 3-17-10e	*	1098
C. O. Buckles et al, Coonrod 2, se c ne sw 3-19-9e	*	2295
HASKELL COUNTY—		
A. W. Ault, Harrison 1, cwl sw ne 14-9-19e	*	635
McINTOSH COUNTY—		
Handfield P&R, Bray 2, c ne ne 10-12-15e	*	2102
MUSKOGEE COUNTY—		
Taylor & Geiger, Tucker 1, se c ne nw 15-15-15e	¶9	785
New-Okla. Oil Co., Lyons 1, c sw se 26-14-17e	*	2190
OKLAHOMA COUNTY—		
Continental O I et al, Black 1, ne c nw nw 10-11-3w, 4-hrs	5340	6381
Slick Estate, Central 1, csl se ne se 3-11-3w	480	6295
Government Pet. Co., White 1, se c sw se 3-11-3w, 7-hrs	7120	6287
PAWNEE COUNTY—		
H. B. Hambley et al, Baker 1, sw nw se 35-20-9e	80	2005
Katherine Oil Co., Walls 2, (owd) cel nw ne 5-20-8e	*	3027
PITTSBURG COUNTY—		
J. L. Pattison et al, McDuff 1, se c sw nw se 32-9n-16e	*	5902
PONTOTOC COUNTY—		
Barnsdall Oil et al, Hart 1, nw c 27-5-6e	165	1689
SEMINOLE COUNTY—		
Empire O&R et al, Fish 2 "D", sw se se 19-7-8e	1175	3008
WAGONER COUNTY—		
J. E. Martin et al, Drew 2, nw c se 26-18-15e	40	1040

KANSAS

COWLEY COUNTY—		
Roth & Faurot, Mattison 1 (wd), lot 5, blk. 44, Musgrove Addn. City of Winfield 22-32-4e	600	3295
Roth & Faurot, Moyer 1, (ewd) lot 8, blk. 45, Musgrove Addn. City of Winfield 22-32-4e	900	3290
Roth & Faurot, Wilcoxon 1, lot 3, blk. 46, Musgrove Addn. City of Winfield 22-32-4e (owd)	200	3300
ELLSWORTH COUNTY—		
Derby et al, Stottenberg 1, se sw nw 22-16-10w	1525	2347
National Ref. Co., Murdock 2, se c 18-27-2e (cwd)	60	2960
GREENWOOD COUNTY—		
Polhamus et al, Johnson 4, nw ne ne 21-24-12e	*	1745
McPHERSON COUNTY—		
Ritz O&G and Shell, Neufeldt 1, sw c nw 15-21-3w	*	3505
SUMNER COUNTY—		
Spencer et al, Porter 1, ne c sw 12-33-4w	*	4515

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
BRADFORD FIELD		
Healey Petroleum Corp., Hunt 4	2	....
Quintruple 17	2	....
L. G. Dana & Co., Dana 2	3	....
Carl Oliver, Franchot 2	2	....
Grow Farm Oil Co., Grow 18	3	....
Cora M. Simons, Corwin 39	3	....
Alice Freeman, Freeman 17	3	....
S. & L. Tartarella, Fee 2	2	....
E. R. Bryner & Son, Newell 2	2	....
Walter Oil Co., Walter 2	2	....
W. M. Howard, Quintruple 3	2	....
Forest Petroleum Corp., Fee 61	2	....
Fee 62	2	....
Fee 81	2	....
Fee 82	2	....
Fee 83	2	....
G. W. Smith Estate, Fee 4	2	....
D. M. Hoffman Est. Fee 9	2	....
S. H. Elder, Hamilton 7	2	....
ERIE COUNTY—		
Netherland Gas & Fuel Co., North Springfield 1	¶¼	2000
CLARION-VENANGO—		
C. F. & C. Oil & Gas Co., Helsel 15	2	....
V. H. Vorhees, Peebles 9	2	....
Clarion County National Bank, Carson 30	*	....
FAYETTE COUNTY—		
Dunn Mar Oil & Gas Co., Grimm 1	*	3900
TIOGA-WAYNE FIELD—		
Mosherville Oil & Gas Co., Braistead 1	*	....
Schrack & Co., Myers 1	*	....
Lycoming Gas Co., Herrington 1	*	....
Brad-Lawrence Co., Ryder 1	*	....

NEW YORK

ALLEGANY COUNTY—		
Miller Bros., Miller 18	12	....
Miller 19	17	....
Leland Oil Co., Leland 1	2	....
Hugh Flynn & Co., Flynn 1	2	....
N.V.V. Franchot, Meridian 1	3	....
Hazel Jordan, Bennett 2	2	....
Mecadam Oil Co., Fee 4	7	....
Shaner & Co., Childs 2	7	....
Sawyer & Shaner, Osterstuck 1	*	....
F. L. Outnam & Co., Pierce 1	4	....
WAYNESBURG FIELD—		
Manufacturers Light & Heat Co., Wood 1	¶¼	2000

Company, Well and Location	Initial Production Bbls.	Depth
WEST VIRGINIA		
CALHOUN COUNTY—		
L. S. Ayres, Kerby 1	¶¼	1956
ROANE COUNTY—		
W. H. Heeter, Knopp 1	40	927
WIRT COUNTY—		
Pollock Myers, Fee 1	1	....
SOUTHEASTERN OHIO		
WASHINGTON COUNTY—		
F. M. Russell & Co., Martin 4	2	....
J. A. Carner & Co., Bosworth 1	¶½	985
CENTRAL OHIO		
LICKING COUNTY—		
G. H. Long, Ashcraft 4	10	2907
LORAIN COUNTY—		
McMillan & Co., Eggers 1	¶1¼	2437
HOCKING COUNTY—		
The Preston Oil Co., McCarty 1	6	2859
MEIGS COUNTY—		
James Simpson & Co., Jackson 1	*	686
Dr. Gribble & Co., Lyman Estate 2	¶½	865
Vulcan Gas Co., Johnson 3	¶¼	853
STARK COUNTY—		
Ohio Fuel Gas Co., Johnson 1	¶5½	4413
Johnson 2	¶2¾	4415
VINTON COUNTY—		
Co-operative Oil Co., Nelson 3	2	1035
INDIANA		
CLAY COUNTY—		
Ohio Oil Co., St. Louis Joint Stock Land Bank 1	*	2785
DAVIESS COUNTY—		
B. D. Ruble, Building & Loan Co. 1	*	660
HENRY COUNTY—		
Delph & Chew, McCormick 1	¶¼	945
PERRY COUNTY—		
Fred Conyers & Co., Cassidy 1	*	....
SWITZERLAND COUNTY—		
F. C. Bakes & Co., Wiseman 1	¶1½	395
Krummell 1	¶¼	441
SPENCER COUNTY—		
I. A. Polhamus, Grass 3	10	....
Santa Fe Oil Co., Berg 4	20	....
KENTUCKY		
CHRISTIAN COUNTY—		
Hickman & Co., Davis 2	¶3	....
DAVIESS COUNTY—		
Thrasher & Co., Johnson 1	*	840
Cox & Co., Bell 3	75	....
HART COUNTY—		
Unknown parties, Finley 1	100	....
Gibson 1	¶½	....
Big Bottom 1	*	....

HAROLD STRADER SPECIAL

Some time ago upon visiting the Houston plant of the Hughes Tool Company, Harold Strader, petroleum engineer, The Texas Company, complained so much about walking the "17" miles necessary to see the plant that when the Hughes Tool Company recently entertained the Gulf Coast Division of superintendents and field foremen of The Texas Company the above "special" facilities were placed at the disposal of Mr. Strader. Photo courtesy Gordon Richmond, Hughes Tool Company

Permits Granted for New Wells

▼ ▼ ▼

CALIFORNIA

FRUITVALE—Mohawk Pet. Co., No. 8, 21-29-27. Bankline Oil Co., No. 8, 21-29-27.

GOLETA—General Pet. Corp., Hollister 1, 3-4-29.

INGLEWOOD—Standard Oil Co., L. A. I. 1-65, 17-2-14.

LOS ANGELES COUNTY—L. C. Hunt, No. 1, 29-3-14.

PIRU—Bardeen Pet. Co., No. 2-B, 13-4-19.

ROUND MOUNTAIN—C. C. M. O. Co., No. 5, 6-28-29.

LOUISIANA

CALCASIEU PARISH—Hill Oil Co., Lake Charles, Vincent 1, 25-10s-10w, 642 ft w and 75 ft n of se cor of section. Shell Pet. Co., Houston, Texas, F. Boyd 2, 13-9s-7w, 225 ft s and 225 ft w of ne cor of sec.

CAMERON PARISH—Brownie Babette Oil Co., Orange, Texas, R. A. Moore 1, 18-12s-12w, 562 ft w and 50 ft s of e¼ cor of sec. Union Sulphur Co., Sulphur, La., Pure Oil 1, 11-12s-10w, 1432 ft n and 404 ft w of se cor of sec.

JEFFERSON DAVIS PARISH—Shell Pet. Co., Houston, Texas, A. O. Fontenot 1, 7-9s-6w, 225 ft e and 775 ft n of sw cor of sec.

LA FOURCHE PARISH—Pap Oil Co., Lake Charles, Esponge & Wizer 1, 26-21s-22e, 1170 ft e and 500 ft n of sw cor of Lot 5. The Texas Co., Shreveport, L. L. E. Leesville 4, 26-21s-22e, 3321 ft due s and 900 ft due e of nw cor of sec.

RICHLAND PARISH—Service Drlg. Co., Shreveport, La., Gardner B-1, 7-7n-10w, 330 ft s and 330 ft e of nw cor sw¼ nw¼.

SABINE PARISH—W. F. Lacy, Shreveport, McNeely 1, 14-7n-11w, 250 ft s and 250 ft w of ne cor of sec.

ST. LANDRY PARISH — Gulf Refg. Co., Houston, Texas, Wilson & Cochran, 4, 6s-5e, n 9 deg. 10 ft s 100 ft, and 581 deg. 47 fe e from middle sw cor of Wilson Cochran 593 acre tract.

KANSAS

BUTLER COUNTY—Blaksley and Wentz, Holliday 4, nw c se 24-27-4e; Blaksley and Wentz, Holliday 3, se sw ne 24-27-4e; Blaksley and Wentz, Holliday 2, (owd) csl sw ne 24-27-4e.

COWLEY COUNTY—Roth and Faurot, College 1, sw c nw nw se 22-32-4e.

GREENWOOD COUNTY—Harwood et al, Carson 1, nw c ne 33-23-11e.

OKLAHOMA

CARTER COUNTY — H. L. Sturm et al's Hooks 1, sw c 18-1s-2w; Carter Oil Co.'s Lynn 1, sw se ne 31-1s-2w.

CREEK COUNTY — Magnolia Petroleum Co.'s Williams 9, ne c nw nw 10-16-7e (owd); H. E. Dowd et al's McIntosh 1, nw c ne nw 13-17-11e; J. H. Wright Estate, Cartwright 2, se c sw ne sw 19-17-11; Bert Smith et al's Nave 1, se c nw 1-18-8e; Gled Oil Co.'s Holmes 2, sw c ne 25-19-8e; Roy Dean et al's Lashley 1, nw c 19-19-9e; Gled Oil Co.'s Hollingsworth 3, se c 20-19-9e; Johnson O&R's Johnson 1, nw c se ne 29-19-9e.

MUSKOGEE COUNTY—J. V. Dunbar et al's McIntosh 1, sw c ne se 4-15-18e; E. W. Ladd et al's Taylor 1, nw c sw sw 20-16-15e; Mack Drlg. Co.'s Richards 1, nw c ne sw 34-16-15e.

OKLAHOMA COUNTY—Wilcox et al 1, sw c ne se 34-12-3w.

OKMULGEE COUNTY—Penrod & Thompson's Barnett 1 (owd) se c 19-12-14e.

PITTSBURG COUNTY—Utilities Prod Co.'s Church 1, ne c nw 16-7-18e.

PONTOTOC COUNTY—Pioneer Pet. Co.'s Bayne 1, se sw sw 16-5-6e; Edna Marie Oil Co.'s Walker 1, sw se nw 22-5n-6e; Rabial Oil Co.'s Norris 1, ne c 28-5n-6e.

STEPHENS COUNTY—E. L. Dameron and Brent's Dameron 1, se sw ne 11-3s-6w; Geo. L. Pace et al's Mullins 1, sw c 35-2s-5w.

For Tabulation and Comparison See Market Section

TEXAS

ARCHER COUNTY—Dr. Chas. Wm. Wallace, Wichita Falls, Fee, 167, 12, S 1, S. P. Ry sur, 335 ft e of No. 11. Perkins & Cullum, Wichita Falls, Falls, C. S. L. 5, B 12, Falls C. S. L. sur, 600 ft from e and 200 ft from s line. Deep Oil Dev. Co., Wichita Falls, L. W. McCrory, 80, 2, B 119, Amer. Trib. sur, 990 ft w and 330 ft from n line lot 1. Continental Oil Co., Fort Worth, Falls, C. S. L. D, 50, 2, B 13, Falls, C. S. L. sur, 849 ft from w and 197 ft from s line.

ANDREWS COUNTY—Furhman Pet. Corp., Midland, W. H. Boner, 640, 1, S 24, B A43, School sur, 1320 ft from n and 440 ft from w line section.

BEE COUNTY — Texas Co., Houston, E. Gremmel, 353, 2, Jno. Pace sur, 450 ft sw of No. 1; 3, 450 ft sw of No. 2.

CHAMBERS COUNTY — Gulf Prod. Co., Houston, J. F. Wilburn, A, 30, 7, H. Griffith sur, 3623 ft from ne and 51 ft from se line. Texas Gulf Prod. Co., Houston, Kirby, 93, B 9, H. Griffith sur, 110 ft s of center of n line. Sun Oil Co., Beaumont, J. Wilburn, 65, 13, Wm. Hodge sur, 50 ft from n and 468 ft from w line.

CALDWELL COUNTY—Kistler, Stivers & Hendrix, Austin, D. Carter, 159, 1, I. Allen sur, sw corner of lease.

CARSON COUNTY — Continental Oil Co., Fort Worth, B. F. Block, 160, 4, S 111, B 4, I&GN sur, 330 ft from n and 990 ft from e line.

DUVAL COUNTY—Thomas & Tarver, San Antonio, Bishop, 160, 5, Sec. 135, 825 ft from w and 330 ft from s line.

GREGG COUNTY—H. R. Smith Inc., Luling, Bouknight, 70, 4, H. H. Edwards sur, 330 ft from n and w lines. Byrd-Frost Inc. & Atlantic, Longview, M. B. Hughey, 105, 1, L. B. Outline sur, 330 ft s of nw cor of lease on lease line. Ruston, Drilling Co., Ruston, La., L. Lacy, 27, 2, M. Van Winkle sur, 150 ft from e and 167 ft from s line. E. W. O'Brien, Dallas, W. Daniels, 20, 1A, M. Van Winkle sur, 150 ft from e and 200 ft from s line. Navarro Oil Co., Houston, E. L. Walker, 10, 3, M. Dillard sur, 183 ft from ne and nw lines. C. M. Cope, Inc., Tyler, J. S. Elder, 2, 1, M. Van Winkle sur, 150 ft from w and 115 ft from s line. T. D. Ramsland, Dallas, Geo. Waters, 1, 1, M. Van Winkle sur, 100 ft from e and 97 ft from s line. Columbia Oil & Gas Co., Dallas, J. B. Doby, 42, 2A, W. M. Castleberry sur, 468 ft from w and 150 ft from s line. J. W. Harreld, Oklahoma City, Okla. J. M. England, 31, 2, M. Van Winkle sur, 900 ft from w and 335 ft from s line. S. A. Guiberson, Jr., Dallas, Stuckey-Thrasher, 40, 2, G. W. Hooper sur, 177 ft from n and 279 ft from e line. S. P. Shelburne, Oklahoma City, Okla., Crim, 70, 2, W. P. Chisum sur, 150 ft from n and 330 ft from e line. J. C. Hunter, Gladewater, F. B. Campbell, 8, 1E, Jno. Ruddle sur, 590 ft from w and 25 ft from s line. Jarrett Pet. Co., Oklahoma City, Okla. P. Jones, 5, 1, W. P. Chisum sur, 268 ft from n and 200 ft from e line. R. J. St. Germain, Tyler, L. Martin, 22, 1, G. Johnson sur, 343 ft from n and 330 ft from e line. Arkansas Fuel Oil Co., Shreveport, La., S. G. Smith, A, 60, 3, W. H. Castleberry sur, 330 ft from n and w lines. V. Calvin, 65, 3, H. Hathaway sur, 330 ft from n and e lines. D. B. McPherson, B, 72, 4, W. H. Castleberry sur, 330 ft from s and w lines. Empire Gas & Fuel Co., Tulsa, Okla., L. A. Jeter, 121, 4, J. R. Crozby sur, 225 ft w and 200 ft from s line. Stanolind Oil & Gas Co., Longview, A. A. Lockhart, 20, 1, M. Tenison sur, 400 ft from s and e lines. H. Key, 90, 2, W. H. Hart sur, 330 ft from s and w lines. Gulf Prod. Co., Houston, A. A. King, 55, 1, Jno. Moffitt sur, 120 ft from w and 330 ft from s line. Shell Pet. Corp., Dallas, J. S. Elder, B, 73, 3, M. Van Winkle sur, 330 ft from n and e lines. G. H. Slaton, 100, 4, G. W. Hooper sur, 330 ft from n and 969 ft from w line. J. Moore, 369, 4, F. W. Johnson sur, 1696 ft from w and 330 ft from s line. Tidal Oil Co., Fort Worth, M. G. Barton, 194, 6, S. P. Hollingsworth sur, 1033 ft from w and 450 ft from n line. J. J. Castleberry, 202, 5, D. Sanchez sur, 330 ft from n and e lines. B. Moore, 90, 2, Mosley sur, 1095 ft from s and 330 ft from w line. C. G. Strong, 113, 2, J. Blair sur, 2260 ft from n and 330 ft from w line.

GRAY COUNTY—R. H. Locke, Oklahoma City, Okla., E. J. Case, 166, 1, S 181, B B2, H&GN sur, 1375 ft from n and e lines.

HARDIN COUNTY — Rio Bravo Oil Co., Houston, Fee, 320, B127A, BBB&C sur, 190 ft n of No. 125A.

HENDERSON COUNTY—Robt. Watchorn, Oklahoma City, Okla., T. B. Wolford, 77, 1, B. C. Wolters sur, 325 vs. from n and 392 vs. from w line.

LIBERTY COUNTY — M. Manning, Houston, R. Sergent, 364, 3, J. McFadden sur, 550 ft n and 600 ft from w line.

MILAM COUNTY—Frank A. Yeager, Rockdale, L. Hoes, 68, 1, E. Allen sur, 650 ft from e and 330 ft from s line.

PALO PINTO COUNTY—Palo Pinto Oil & Gas Co., Strawn, Smith, 1, 1A, B2, Woodlawn Add. sur, 150 ft from s and w lines.

PECOS COUNTY—Corvette Oil Corp., Fort Worth, Monroe, 80, A2, S 39, B 194, GC&SF sur, 425 ft s of No. 1A.

RUSK COUNTY—Darby Pet. Corp., Tulsa, Okla., C. O. Christian, 97, 4, M. McCabe sur, 330 ft from w and 1020 ft from s line. Jackson, Wise & Snedden, Tyler, J. H. Stewart, 30, 2, Jno. Womack sur, 235 ft from nw and 900 ft from e line. S. P. Borden, Shreveport, La., T. O. Mason, 3½, 1, J. B. Cadena sur, 145 ft from e and 210 ft from s line. Droppleman Drilling Co., Overton, F. J. Cox, 40, 4, W. M. Bears sur, 955 ft from n and 330 ft from w line. Imperator Oil Co., Dallas, D. C. Joyner, 7½, 1, F. Cordova sur, 170 ft from n and 477 ft from e line. Humble Oil & Ref. Co., Houston, A. Scott, 52, 2, W. M. Bears sur, 1224 ft from e and 224 ft from s line. I. Holt, C. 99, 3, W. H. Bears sur, 990 ft from w and 224 ft from s line. Amended location. W. P. Moore, C, 18, 1, W. P. Moore sur, 330 ft from n and w lines. J. E. Wheelis, 168, 9, F. Cordova sur, 159 ft from w and 1740 ft from s line. E. W. Naulls, 73, 1, T. J. Martin sur, 330 ft from s and w lines. Sun Oil Co., Dallas, S. A. Selman, 67, 4, M. J. Pru sur, 330 ft from w and 990 ft from s line. Mid-Kansas Oil & Gas Co., Shreveport, La., R. G. Mason, 104, 4, J. B. Cadena sur, 330 ft from w and 140 ft from s line. J. F. Mason, 104, 3, J. B. Cadena sur, 662 ft sw of No. 1. Tidal Oil Co., Fort Worth, J. M. Shaw, 85, 4, E. Collard sur, 389 ft from n and 375 ft from w line.

SMITH COUNTY—W. B. Hamilton, Wichita Falls, L. A. Gambrell, 54, 4, R. McAnulty sur, 1350 ft from n and 166 ft from w line. Sun Oil Co., Dallas, J. D. Henson, 216, 7, J. Vargas sur, 412 ft from e and 330 ft from s line. O. W. Knight, 264, 9, D. Collines sur, 407 ft e of center of w line.

STAR COUNTY — Quien Sabe Oil & Gas Co., Rio Grande, H. K. Kusch, 14, 1, Por. 75, Tract 11, 225 ft from e and 150 ft from n line.

UPSHUR COUNTY—Sun Oil Co., Dallas, J. Hargraves, 200, 3, M. Mann sur, 1440 ft from n and 483 ft from e line. Lincoln & Barkley, J. B. Webb, 31, 2, G. W. Hooper sur, 330 ft from n and e lines. Humble Oil & Ref. Co., Houston, J. K. Edwards, 271, 11, D. Ferguson sur, 1160 ft from w and 330 ft from s line.

VAN ZANDT COUNTY—Pure Oil Co., Fort Worth, D. F. Cade, 45, 1, Nacadoches C. S. L. sur, 250 ft from s and e lines.

VAL VERDE COUNTY—R. B. Couch, Fort Worth, J. P. Yoes, 320, 1, S. L. Williams sur.

WISHITA COUNTY — Holbrook & Woods'

Wichita Falls, S. Kelly, 40, 1, S 3, S. P. Ry. sur, 150 ft from n and w lines.

YOUNG COUNTY—F. H. E. Oil Co., Fort Worth, Finch Est., 40, 3A, 31, TE&L sur, 43 ft from e and 210 ft from s line. L. A. Long et al, Graham, R. M. Williams, C, 80, 2, R. O. Wolfork sur, 347 ft nw of No. 1 Parker & Brazelton, Olney, J. W. Bulloch, 40, 1, 261, TE&L sur, 250 ft from n and 150 ft from w line. Hamilton, Lee et al, Wichita Falls, I. Clifton, 80, 1, 351, TE&L sur, 150 ft from s and e lines. A. Wilman, 43, 1, 352, TE&L sur, 150 ft from n and e lines. H. B. Sparks, Olney, R. Campbell, 50, A4, 1389, TE&L sur, 300 ft e of No. 3. Wooten & Reed, Graham, Y. Swain, 50, 2, 1465 TE&L sur, 750 ft from n and 150 ft from w line.

ZAPATA COUNTY—F. H. Etheridge et al, San Antonio, J. Bustamente, 80, 5, No. 35, Fansler sur, 150 ft from n and 1540 ft from e line. Bob & Richey, Bruni, J. M. G. Martinez, 160, 29, B 24, C. Redondo sur, 810 ft from w and 360 ft from s line. Winch & Billings, Laredo, J. Bustamente, 80, 7, No. 35, 150 ft from n and 1574 ft from e line. Daniels & Hill, Laredo, G. T. Montemayor, 40, 1, S 64, B 7, 150 ft from s and w lines. Allied Oil & Gas Co., Laredo, E. Gutierrez, 532, 20, No. 4, Comitas sur, 1405 ft sw and 150 ft from se line; 19, 850 ft from sw and 150 ft from se line. Borgan & Belcher, Laredo, M. Garza, 80, 1, B. 62, Cimitas sur, 150 ft from s and e lines.

Wildcat Reports From All Sections

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SOUTH TEXAS

BASTROP COUNTY—Birdwell et al's White 1, Nancy Roberts sur, 4 mi se Belton, dr 475 ft last rept. Humble O&R Co. & Sun Oil Co.'s Powers et al 1-B, Blk 197, 4 mi ne Bastrop, coring 2312 ft. E. R. Marts & Beavens' Wm. Bahm 2, 350 ft e No. 1, J. Standifer sur, ru. Texas Dev. Co.'s C. H. Ray 1, Thos. Christian sur, 1¼ mi ne Elgin, dr 2665 ft.

BEE COUNTY—Buck Oil Corp., George Ray 3, s offset Gremmel 2, Williamson sur, Pettus (Damac) lcn. Coastal Oil Finding Co.'s Handley 1, 12 mi sw Beeville, move on. J. M. Davis et al's Geo. Ray 1, (formerly Morgan) w Damac lease, Jno. Williamson sur, Pettus (Damac) spud in. Houston Oil Co.'s J. F. Portis 3, e No. 2, Pettus (Damac) A. Smalley sur, sand 3914-19 ft, show 450 ft oil, 120 lbs. pressure on ¾ choke 10 min, dr in. Humble O&R Co.'s Laura Thompson 1, Garrett Roche sur, dr 5175 ft. McMurray et al's (formerly Weinert) Geo. Ray 1, Jno. A. Williamson sur, dr 2845 ft. Slick Seelingson, Inc.'s, Geo. A. Ray 4, n offset Portis 3, G. A. Kerr sur, Pettus (Damac) dk; George A. Ray 3, e offset Gremmel 1, G. A. Kerr sur, Pettus (Damac), sand 3884-92 ft, dst show 425 ft oil, 150 lbs pressure 10 min on ¼ choke, dr in. The Texas Co.'s L. Gremmel 2, John Pace sur, w offset No. 1, Pettus (Damac) dr 2010 ft; L. Gremmel 3, n offset McMurray 1, dr 1000 ft; Gremmel 4, w offset No. 3, lcn; Gremmel 5, w offset No. 4, lcn.

BEXAR COUNTY—Alamo Nat'l Gas Co.'s G. J. Gembler 2, A. Menchaca Sur No. 51, Dobrowolski pool, prod abt 1,000,000 cu ft gas, td abt 710 ft. Anderson, Ingersoll & Miller's Stemburg, 9 mi sw San Antonio, F. Rolen sur, dr 320 ft. J. E. Anderson's S. A. Irrigated Farms 1, C. Logan sur, near Kirk, 20 mi sw San Antonio on Chicon Lake Fault, td 1773 ft, shot 200 qts 1120-80 ft, plug back 1190 ft. S. W. Blount's S. A. Land & Dev. Co. 1, 1 mi e Medina river on Palo Alto rd, 12 mi s San Antonio, sd 520 ft. Jno. T. Callahan's J. H. Buch 1, J. W. McCamley sur, 9 mi w S. A., no rept. Chiquita Oil Co.'s (Witherspoon) Pollock 1, J. W. Rialls sur No. 11, Cooksey area, abn abt 1750 ft; E. H. Cooksey 3, J. W. Rialls sur, Cooksey, lcn; Hunter 1, J. Martinez sur, ½ mi s Cooksey pool. Eckert et al's Edwards Heirs 1, Martinez sur, 8 mi se San Antonio, Gonzales Road, dr 1140 ft; Brehm 8, Martinez sur, Eckert pool, dr 500 ft. Gatlin Oil Co.'s I. A. Beck 10, J. Montez sur, Eckert pool, dr 625 ft. Ewell Neill's J. M. Watson 1, Martinez sur, 10 mi s San Antonio, sd 2266 ft. Schneider, Rees et al's Claussen 1, ne San Antonio, SJ&A sur No. 17, sd 1143 ft. Van Duyn et al's Bradden 1, 1 mi n Medina river, 8 mi w San Antonio, sd 650 ft.

BLANCO COUNTY—Hardy Sitton's Standeford 1, sur 155 ft, 3¼ mi sw Blanco City, td 1260. Thomas Hicks et al's Specht & Wiedner 1, Thos. M. Fowler sur No. 27, 2 mi s Twin Sisters, sd 1635 ft.

CALDWELL COUNTY—Joe Bruner's Malone 1, A. Floyd sur, 2 lcns s Salt Flat, sd 2702 ft, Georgetown. T. W. Cole's J. M. Pierce 1, S. Seal sur, n Dunlop wells, spud in. Detroit Texas Dev. Co.'s (M. O. Rayor) Dunlop 2, Solomon Seal sur, 2¼ mi ne Luling, 2503 ft, show sulphur water in Edwards, plug back. Meyer Exploration Co.'s Walker 1, Solomon Seal sur, 3 mi w and n Luling, ru.

DUVAL COUNTY—Cole Pet. Co.'s Benavides 75, Blk 8, sur 19, Mariano Arispe Grant, Cole-Bruni pool, dr 1100 ft. Duval Oil Corporation's Bishop Cattle Co.'s Bishop Cattle Co. 7, sur 135, Gov't Wells field (S&O), td 2360 ft, flow 100 bbls through ¼ inch choke. Frank Garvis et al's Schallert 2, Blk 10, Cain & Smith sur 55, Palangana Salt Dome, dr 1430 ft. O. W. Killam's Sutherland 1, sur 7, dr 2088 ft; Peters 1, Sur 1, ru. Magnolia Pet. Co.'s (Texas) Duval County Ranch Co. 1-B, Sec. 96, 1 mi s and 5 mi e S. R. C., set 45 ft 12½ inch csg. R. A. Thompson's Parr 1, San Andres Grant, dr 1395 ft. Thomas & Tarver's Welder Wood 1, 16 mi from S&O pool, sec 269, Welder-Wood ranch, sd 2303 ft; Bishop Cattle Co. 5, sur 135, Gov't Wells field, dr 1000 ft.

FRIO COUNTY—Arthur H. Wray's Roche 1, sec 123, A. Hutzler sur, near Big Foot, 1500 sw Burns 1, sd 3707 ft, Georgetown.

GOLIAD COUNTY — Benedum and Trees and Plymouth Oil Co.'s Park 1, BS&F sur No. 8, 2900 ft se Gibson Parks 1, sand 4534-55 ft, show oil and gas, csg set 4480 ft, set cement in 63 ft open hole, screen parted, fish. Camp & Stanolind O&G Co.'s Pettus 3, Trinidad sur, Charco area, sand 4284-91 ft, now show, abn 4492 ft. Simms Oil Corp. & H. H. Weinert's Mike Stepke, W. H. Hughes sur, 1 mi ne Slick pool, dr 4170 ft. L. Neal et al's Pettus 1, J. M. Pettus tract, Pedro Trevino sur, w Goliad, sd 4020 ft.

GONZALES COUNTY—Crowder Oil Co.'s Preston 1, W. W. Pace sur, spud in. Johnson-Matlocks O&G Co.'s J. James 1, M. A. Williamson sur, lcn.

GUADALUPE COUNTY — Barnhill et al's Hoffman 1, DeWitt sur, between Seguin and Darst Creek, sd abt 1760 ft. W. M. Eiser et al's Wells 1, ne quarter Jose de la Baume sur, top chalk 3445 ft, top of Edwards 3815 ft, td 3837 ft, coring deeper, formation hard and dry. Humble Oil and Refining Co.'s Dan Denman 3, William Arrnigton sur, Camp pool, Darst Creek, e No. 2, top chalk 2214 ft, crevice 2269, dry top Del Rio 2466, top Edwards 2575 ft, td 2580 ft, sd for orders, little show. J. M. Scott's E. Drumm 1, C. Campbell sur, near Staples, dropped.

HIDALGO COUNTY—B. H. Adams' (Barrett & Kanellos) J. D. Brock 1, Blk 15, Porcion 79, 15 mi nw Mission, dr 1000 ft. Davenport et al's Wells 1, 30 mi w Mission, ru. La Joya O&G Co.'s W. L. Hart 1, w part of county, Leo. Ryal's 1, Share 38, Porcion 80, dr 4000 ft. Dayle L. Smith Oil Co.'s Fernandez 5, Porcion 75, 21 mi w McAllen, sd 4026 ft; Daskman 3, 900 ft w Fernandez, dr 200 ft.

JIM HOGG COUNTY—L. W. Conner et al's Holbein 1, blk 7, sur 7, Reuben Holbein Oil lease, sub of Share 3, Las Animas Grant, dr 430 ft. R. F. Foree et al's Holbein 1, blk 54, sur 9, Reuben Holbein oil lease, sub of share 3, Las Animas Grant, dr 2450 ft. T. P. Morgan's Fee 1, Share 19, Palo Blanco Grant, set 133 ft 12½ csg, woc. O. W. Killam's Hinnant 1, sur 164, Randado field, dr 1295 ft. United N&S Oil Co.'s Gutierrez 1, Blk 325, E. M. Doty sub, Charco Redondo Grant, coring 1930 ft.

JIM WELLS COUNTY—Mag. Pet. Co. & Vacuum Oil Co.'s Seelingson 1, 15, mi s Ben Bolt, dr 2900 ft.

KARNES COUNTY—Jones et al's (J. Morrisey) Cochran 1, Daniel B. McConnel league, e Kenedy, dr 1625 ft, (last rept). V. F. Neuhaus' Della B. Tips 1, 5 mi se Kenedy, Carlos Martinez sur, cored sandy shale 2565 ft.

KENDALL COUNTY—Borgett et al's W. Hagg 1, w Avery sur, sd 1250 ft. Dixon Oil Co.'s Behr, Jessie Wilson sur, 3 mi s Sisterdale, sd 2715 ft.

KERR COUNTY — Evans and Gant's Jeff Love 2, sec 1593, ½ se discovery, deepened to 5849 ft, top sand 5835 ft, show oil 31.5 gravity, corrected and water, pull and reset 3/16 inch csg with collar to cut off water; Jeff Love 3, J. Martinez sur No. 1594, lcn. Herbert & Halbert's J. D. Witt 1, W. H. Hamilton sur, sec 1923, td 100 ft, prep to deepen.

KLEBERG COUNTY—Barbee and Hunter's J. D. Finnegan 1, el Pasidio sur, 7 mi s Kingsville, td 3031 ft, to deepen.

LA SALLE COUNTY—Buckley Ranch O&G Co.'s Buckley et al 1, sur 37, Buckley-Walling ranch, abn 5205 ft.

LIVE OAK COUNTY—Henderson Coquat et al's H. Hewitt 1, Thomas Adams sur, sec 4, sd 445 ft. Houston Oil Co.'s Cartwright 24, J. M. Colchado sur, Mt. Lucas Field, sand 5290-5323 ft, dst show 1200 lbs, set csg, woc. V. G. Schimmel's C. L. Terrell 2, D. O'Boyle sur, abn 1610 ft.

MAVERICK COUNTY — I. N. Boicourt's Bandera School Land 2, sd 2284 ft. Texas Gas Utilities Co.'s Chittim 8, sec 129, blk 7, I&GN sur, Chittim Field, sd 4875 ft.

McMULLEN COUNTY—A. E. Adams' Martin 1, L. F. Melon sur, 15 mi sw Tilden, sd 363 ft. Jacob, Buzzini & Pickett's Brewer 1, 2½ mi n Jacob 1, Spark sur, Wichett Blk, 135 ft of 10-inch, woc. V. G. Schimmel's F. A. Hale 1, Sur 63, Three Rivers ranch sub, sand 370-82, show 200 lbs pressure, 8,000,000 cu ft, cement in csg abt 385 ft.

MEDINA COUNTY — Frank A. Brown's Jacob Fohn 1, J. F. Tory sur, 8 mi s Hondo, sd 922 ft. C. J. Webster O&G Co.'s (National) Adams 1, Hillemeyer sur No. 85, near Devine, top Austin chalk 2526 ft.

NUECES COUNTY—Gulf Coast Oil Co.'s J. Sagarin 1, H. L. Kinney sur, Saxet, dr 2950 ft, last rept; Elder 1, Saxet, sd 5070 ft; Sedwick 2, e offset Harrell 1, Saxet, lcn; Sedwick 3, e offset Houston's Harrell 1, lcn. C. E. McCarthy's 1, Saxet, making lcn. Neal-Milton & Kepley Prod. Co.'s Roark 2, Saxet, lcn. Saxet Oil Co.'s Weil 1, dr depth not rept; Dunn 6, Saxet, td 4195 ft, prep to deepen.

REFUGIO COUNTY — Blanco Creek Oil Corp.'s Dammann 1, blk 16, Bonnie View Ranch

ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp — spudding; sr — straight reaming; std — standardizing; sw — salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

Sub, 8 mi s and e Refugio field, sd 4685 ft. G. C. Dixon's P. M. Peck 1, Sec. 24, Bonnie View Ranch, set 100 ft 12½ inch csg, now sd. Humble O&R Co.'s M. V. O'Conner 2, John Keathing sur, near Victoria line, 933 ft n and 75 degrees w O'Conner 1, dk. Larero Gas & Pet. Co.'s Strauch 4, lot 6, Blk 2, Refugio, top sand 3636 ft, set 6⅝ inch csg, woc. Moody-Seagraves Prod. Co.'s St. John 2-A, Refugio sur, sand 5504-18 ft, 6⅝ inch csg set 5505 ft, pull screen to deepen. United Prod. Co.'s W. J. Fox 2-A, Hews and Brown sur, Refugio, sand 6464-74 ft, set 5½ csg, 6463 ft, woc.

SAN PATRICIO COUNTY—John F. Camp's Jackson 1, sw cor of southwest ¼ sec 30, 3 mi n of Edrey, prep to move on machinery.

STARR COUNTY—Davenport et al's Fee 1, El Benadito grant, dr 830 ft, sd 831 ft. R. E. Johnston's Goodrich 1, tract 5, Porcion 81, Stryalls Oil Corp.'s M. E. Salinas 1, Share 38-C, Porcion 80, dr water well. R. B. Suttles' Guerra 1, Porcion 110, dr 810 ft. Jess Williams' Welsh 1, Pedernal Grant, set 8 inch csg 425 ft, woc.

TRAVIS COUNTY — Fritz Fuchs W. M. Scheiffer 1, A. C. Caldwell sur, sd 520 ft; A. F. Smith 1, Kimbor sur, lcn. C. R. Franklin's J. Wilson 1, A. Alexander sur, sd 1195 ft. Henze & Ray's J. M. Hatch 1, center Hamilton sur, sd 565 ft. Bass & Fuch's R. A. Chadwich 1, A. C. Caldwell sur, dk.

VICTORIA COUNTY—C. R. & M. Co. & C. B. Bunte, Inc.'s, C. R. Keenan 1, center 2500-acre ranch, M. Leon sur, sand 5812-91 ft, ds and show 600 lbs. 5 min through ¼ inch chokes top and bottom, mud in tester show plenty oil, set 7 inch OD csg 5180 ft, woc. Houston Oil Co.'s Konrad 1, T&NO sur, Beck Salt Dome, n Victoria, td 5310 ft, plug back to abt 4850 ft, sd, to perforate csg.

WEBB COUNTY—French Oil Corp.'s Benavides 5-A, Sur 659, sd 100 ft. Harris, Hayes & Newton's Laurel 1, blk 5, sur 215, abn 2504 ft. O. W. Killam's Bruni 1, Sur 445, dr 2980 ft; Bruni (Ranchito) 4, J. V. Borrego Grant, dk. Mag. Pet. Co.'s Benavides 6, sur 660, Cole-Bruni field, dr 450 ft. Power & Detterheim's Cowan & Goss 1, sur 1608, sd 300 ft. Rosenberg, Johnson & Peacock's Laurel 1, Blk 10, sur 27, Carolina Texas pool, dr 2300 ft.

WILLIAMSON COUNTY — Burns et al's Wilder 1, R. Owens sur, dr 1496 ft. Hays and Gee's E. G. Johnson 1, B. C. Low sur, s Georgetown, sd 1595 ft. McLeans et al's Miller 1, Manlove sur, sd 1670 ft. R. S. Wilson's J. S. Speckels 1, J. Jordan sur, 1 mi n Coupland, sd 890 ft.

WILSON COUNTY — August M. Blume's Nickelson 1, Diaz sur, 2½ mi s Floresville, sd 1600 ft.

ZAPATA COUNTY—Allied O&G Co. & Allen & Morris' Gutierrez 21, Share 4, Fansler Partition, Comitas Grant, Escobas area, dr 300 ft. Bob & Richey's (Duke) Martinez 28, Blk 24, W. R. Duke Sub, Charco Redondo grant, lcn; Martinez 29, blk 24, lcn. Ballard & Mercer's Flores 1, blk 27, Marks sub, Porcion 37, dr 1590 ft. Brogan & Belcher's M. Garza Estate 1, Blk 62, C. A. Douglas sub, Comitas Grant, spud in. F. M. Blair & Son's Montemayor 1, Blk. 1, sur 63, Escobas Field, ru. Daniels & Hills, Montemeyor 1, Blk 7, sur 64, Escobas area, sand 1478-82 ft, 5 3/16 inch csg set, woc. F. H. Etheridge's Jose Bustamante (Sun) 6, lcn; Jose Bustamante 5, share 35, Fansler Partition, Comitas Grant, Escobas pool, sand 1469-73 ft, 6⅝ inch csg 1469 ft, completed 100 bbls. Winch & Henne 2, Martinez pool, sur 286, clear lcn. Grayburg Oil Co.'s C. F. Martinez 1, sec 4, Jennings pool, abn 2309 ft. O. W. Killam's Bustamante 14, Blk 11, Share 5, Comitas Grant, Escobas field, to make lcn; Bustamante 18, Share 5, Fansler Partition, Comitas Grant, Escobas field, sand 1450 ft, testing. Medina (S. Bustamante) 3, Share 34, Fansler Partition, Comitas Grant, Escobas field, set 6⅝ inch csg 1854, woc. Trevino Oil Corp.'s Trevino 15-A, Escobas pool, Blk 13, sur 412, set 6⅝ inch csg, top sand, woc. United North and South Dev. Co.'s Gutierrez 1, blk 325, E. M. Doty O&G Sub of Charco Rendondo Grant, dr 450 ft. Winch and Billings' Bustamante 1, Share 35, Fansler Partition, Comitas Grant, Escobas pool, sand 1456-58 ft, completed 150 bbls; Jose Bustamante 8, Share 35, Fansler Partition, Comitas Grant, Escobas field, lcn.

EAST TEXAS

HARRISON COUNTY—Ryans Cons. Pet. Corp.'s J. M. Furrh 1, T. J. Copelain sur, rig. J. M. Gholson's Bivins 1, T. D. Peterson sur, sd 3085 ft. Lloyd Oil Corp.'s Timmons 1, Jno. Findley sur, 10-inch 240 ft, sd 4195 ft, lime and anhydrites.

MARION COUNTY—Baunauch Dev. Co.'s Laun 1, Henry Fulgram sur, dr 2300 ft chalky shale.

PANOLA COUNTY—United Prod. Corp.'s Werner 11, D. B. Lewis sur, 15½ cas 383 ft, 9-inch 3525 ft, top Washita 2190 ft, top anhydrites 4150 ft, base 4625 ft, dry 5782-5804 ft, cemtd back to 3650 ft, td 5858 ft, wo cement. Daisy O&G Co.'s Rucks Hrs. 1, Jno. Palmer sur, sd 3264 ft shale. Moses & Wallace's C. L. Daniels 1, Isabel Hanks sur, sd 650 ft. Hoffer et al's Cameron 1, W. A. Lagrene sur, dk. Davidson et al's Latham 1, Wm. Rich sur, 10-inch 260 ft, base chalk 2095 ft, sd 2334 ft. Nelson et al's Williams 1, Jas. Hanks sur, 12½ cas 400 ft, sd 3055 ft lime and shale. Stamps et al's Chadwick 1, Wm. Scantleberry sur, rig.

SHELBY COUNTY—E. L. Chapman's Holt 2, Matthew Moore sur, 10-inch 103 ft, sd 1026 ft (corrected depth second hole). McRobie et al's Windham 1, Wm. Leach sur, 296-ac tract, 12½ cas 276 ft, top PG 1930 ft, 8¼ cas 1750 ft, slight gas show 2282 ft, base chalk 2572 ft, dry slight show oil 2686-92 ft, 9 ft saturated core 3360-69 ft, 6⅝ cas at 3366 ft, parted, sd while trying pull it, td 3393 ft. Maulding et al's Frost Ind. 1, A. B. Fountain sur, top PG 2900 ft, sd 3246 ft. H. H. Gracey's J. A. Morrison 1, Wm. English sur, sd 2600 ft. C. H. Tautenhahn's J. C. Board 1, Thos. Baker sur, sd 20 ft, partly rigged up. Ridgeway et al's Polley 1, Domingo Gonzales sur, 10-inch 112 ft, sd wo cas 822 ft. K. H. Francis' Jno. Mims 1, Mary Smith sur, top Midway 847 ft, 6⅝ cas 2817 ft, sd 3255 ft shale. United North & South Prod. Co.'s Windham 1, A. H. English sur, 171.5 ac tract, 12½ cas 376 ft, top PG 2004 ft, top AC 3198 ft, tested 17 joints mud and slight show oil 3355-91 ft, top Georgetown lime 3369 ft, arr set 6⅝ cas, td 3391 ft. Harry Elliott's Pickering 1, C. H. Patterson sur, 361-ac tract, 10-inch 108 ft, pumping baroids after strong gas show with considerable oil, arr set cas, td 1495 ft, Nacatosh chalk. Ray & Dunbar's Hayden 1, 153-ac tract, D. F. T. Yordt sur, dk.

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
AUSTIN COUNTY—		
Parmesan & Cafferkey, Wm. Schoeleckte 1	*	1540
BRAZORIA COUNTY—		
Quintette Oil Co., Levitt 1.....	*	1595
NEWTON COUNTY—		
Briscoe et al, Inman 1	*	1300
WALKER COUNTY—		
Joyce Richardson, Smuthers Bros. 1.	*	3450

BRAZORIA COUNTY — The Texas Co.'s Belcher 2, 1000 ft se Belcher 1, Manvel dist, dr 4250 ft li and sn. Layne Texas Co.'s Wisdom 6, Damon Mound, dr 3490 ft sn and sh; cmtd 4½-in cas at 3468 ft.

BURLESON COUNTY — M.O.T. Oil Co.'s Rogers 1, dr hd sh 1766 ft.

CHAMBERS COUNTY — Pure Oil Co.'s Mayes 14, Lost Lake, Oil sn 1812-73 ft, will set scr. Texas Gulf Prod. Co.'s Ilfrey 2, Barbers Hill, pumping water at 5248 ft. Sinclair O&G Co.'s J. F. Wilburn 9, Barbers Hill, pulling scr; Wilburn 10, dr 4550 ft sndy li and sh; Wilburn 11, r at 4432 ft. Sun Oil Co.'s Higgins 2, pulling scr at 3645 ft. The Texas Co.'s Lawrence Fee 2, cored sn and sh shwg oil at 5303-9 ft.

FORT BEND COUNTY—Stone & Wyman's Beard 1, between Long Point and Damon, td 1275 ft, r at 975. Naylor & DeCosta's Herzog 1, 1½-mi n Thompson station, ru. Cullen & West & Gulf Prod. Co.'s Lockwood Sharp 1-A, Clear Lake, temp abn in brit sh at 4805 ft; George 3, ru on lcn in Clear Lake, 1000 ft e No. 2, John Rabb Sur. Gulf Prod. Co.'s Myers 2, Clear Lake, dr 3852 ft.

GALVESTON COUNTY — Yount-Lee Oil Co.'s Cade 24, High Island, shwg oil 5275-5284, td 5318, set 7-in cas; Cade 25, dr 4970 ft.

GRIMES COUNTY—Barnett et al's G. W. Dodd 1, ne part of county, w of Iola, 280 ft n of Cobb's Dodd 1, ru. Rianjo Oil Co.'s Cuthrell 2, Pat B. O'Connor Sur, dr 867 ft. Stanolind O&G Co.'s Mary Sullivan 1, lcn in Asa Yeamans Sur.

HARRIS COUNTY—H. H. Givens et al's Lobit 1, near Addicks, 8 mi w Houston, td 2739 ft, straightening up dk. W. R. Alexander et al's Herman Hale 1, R. A. Hanks Sur, dr gbo 2725 ft. Hewitt & Shibe's Dan Wise 1, Washington County, R. R. Sur, Sec. 11, dr 3211 ft. Rio Bravo Oil Co.'s Settegast 10-A, Pierce Junct. Oil sn 4510-28, fsg for scr.

HILL COUNTY—C. Houseman's Griffith 1, Waddell Sur, fsg for dr st at 3080 ft.

JACKSON COUNTY — Chicago-Gulf Corp.'s Drushell 11, Edna dist, ru and stg; Drushell 4, td 2685 ft, ru to dpn.

JASPER COUNTY—Hext Dr. Co.'s Flournoy 1, B. F. Jones Sur, 4 mi se Jasper, dr 3360 ft.

JEFFERSON COUNTY — Pipkin & Elam's Broussard 1, 2 mi w Sabine, McGaffy Sur, dr sh 1671 ft. Texas Gulf Sulphur Co.'s Thomas 5, dr li rk 1573 ft. Ft. Worth Dev. Co.'s O. M. Todd 1, Cheek dome dist, Wm. Carr Sur, dk.

LIBERTY COUNTY — M. Manning's R. Sargent 3, Moss Bluff, lcn 550 ft fr n and 600 ft fr w line, J. McFadden Sur. Texas Gulf Sulphur Co.'s D. J. Harrison 6, Moss Bluff,

One day recently Pat Rutherford, drilling contractor and operator in the Refugio area; Wm. F. Morgan of Moody-Seagraves-Morgan Company, and Mrs. Morgan climbed into Mr. Morgan's plane at San Antonio at 4 p.m., flew to the Kerrville ranch of W. L. Moody III and had an eight-point buck on the ground the same afternoon. Each member of the party, shown in the picture (Mr. Morgan, left), killed a deer on this successful trip

805 ft. J. T. May's Dunman 1, lcn in n central part of county, Josiah C. Martin Lge.

MATAGORDA COUNTY—United N. & S. Dev. Co.'s Stoddard 1, Buckeye dist, J. C. Keller Sur, dr 6371 sh.

MONTGOMERY COUNTY—Heep Oil Corp.'s R. L. Cartwright 1, Jno. A. Davis Sur, bldg rd, Peaveyhouse Oil Co.'s Sealey 1, Peaveyhouse Sur, dr w sn 2864 ft. Karl Young's C. A. Damuth 1, V. T. Nichols Sur, sd at 1775 ft.

ORANGE COUNTY—Ala-Tex Oil Co.'s Reed 1, Orange dist, sdtr in sh at 3188 ft Cruse Oil Co.'s Mansfield 1, Orange dist, dr rk 2281 ft. The Texas Co.'s Polk-Kuhn Glass Co. 1, Port Neches, 5045 ft in sticky sh and li; Kuhn 3, Port Neches, ru; Polk 3 Port Neches, ru.

POLK COUNTY—Humble O&R Co.'s West Lbr. Co. 1, Michael Chavence Sur, ru.

TRINITY COUNTY—John Deering's Gibson 1, A. Donovan Sur, dr 730 ft in sh.

WALKER COUNTY—Hart Oil Co.'s Thompson Bros. 1, formerly C. C. Meredith's tst shwd fr water at 1828-32 ft.

NORTH LOUISIANA

Completion

BOSSIER PARISH—
H. I. Morgan et al, Smith 1, 22-19-11 . . . . . $17 1770

BOSSIER PARISH—H. I. Morgan et al's Smith 1, 22-19-11, 10-inch 80 ft, gauged 16,803,000 cu ft gas with 710 lbs. rock pressure, td 1770 ft, sand 1758-70 ft (upper Trinity) 6-inch cas 1758 ft. Plain Dealing O&G Co.'s Nattin 1, 15-22-14, 4½ cas 2882 ft, 150 ft oil in hole, wosr 2089 ft. Dr. Hankins et al's Newell 1, 12-19-11, sd 1730 ft.

CADDO PARISH—Pelican Nat. Gas Co.'s Cooper 1, 29-18-14, ta 3648 ft, red shale and lime. Louanna O&G Co., Inc.'s, Hammock 1, se se 32-19-16, rig. Calatex O&G Co.'s Hudson 1, 8-16-16, lcn.

CALDWELL PARISH—Monroe Pet. Corp.'s Burton 1, 36-12-2e, sd acct titles, td 2986 ft. Carter Bell et al's Taylor 1, 17-14-4e, 12½ cas 110 ft, sd 400 ft.

DE SOTO PARISH—A. R. Smith's Horn 1, nw se 15-12-16, sp and sd. Rellit O&G Co.'s Cannon Hrs. 1, 12-11-16, sd 1965 ft. E. T. Oakes' Johnson 1, 30-13-15, co to deepen, td 3027 ft hd lime (corrected depth). Walters & Nicholson's Jim Guy 1, 3-11-13, sd 1260 ft. A. A. Tuntin's Nickie 1, 7-13-12, dk.

NATCHITOCHES PARISH—C. M. Talley et al's Talley 1, 29-11-10, sd 1380 ft. J. W. Cooper et al's Cooper 2-A, 35-11-10, sd 1515 ft. Gerson et al's Smith Island 1, sw nw sw 11-10-8w, 12½ cas 90 ft, gas and sw flow killed, arr skid over for new hole, td 585 ft sand. R. A. Keator's Stephens 1, 25-10-6w, 12½ cas 178 ft, sd.

OUACHITA PARISH—S. C. Wilson et al's W. L. Williams 1, sw se 5-16-1e, 12½ cas 180 ft, sd 1810 ft.

RICHLAND PARISH—National Gas Co.'s Singletary 1, 20-18-7e, sd 2515 ft.

SABINE PARISH—J. J. Kean's Belton 1, nw se ne 31-9-13, 8-inch cas 1590 ft at top chalk, oil show at 1600 ft, gas show 1617 ft, oil show 2039 ft, bailed dry show oil 2084-99 ft, base chalk 2115 ft, sd repr rig 2705 ft, lime and shale. R. L. Gay, Tr.'s, Long-Bell A-1, nw nw 10-8-13, top Glen Rose 4220 ft, dr 4504 ft. Coates Pet. Co.'s Stille 1, nw se 35-8-13, lcn; Hill 1, se se 35-8-13, lcn; Parie 1, ne se 2-7-13, 10-inch 100 ft, top marl 2066 ft, 6-inch cas 2066 ft, top chalk 2092 ft, 2 mil ft gas show with spray oil at 2097 ft, deepened to 2179 ft, bailed dry, wo, td 2179 ft. Hudson & Bird's Walden 1, sw ne 26-8-11, elev 290 ft, 10-inch 100 ft, top marl 2355 ft, top bro chalk 2440 ft, sd 2454 ft chalk. Zeke Lohman's McCormick 1, ne sw 2-7-11, sd 1606 ft. Roy Baker's Sabine 1, 11-7-12, wosr 2548 ft. Gautier et al's Meshell 1, 30-8-12, wosr 2599 ft. Loring Oil Co.'s Bowman-Hicks 18, sw nw 15-7-12, elev 264.1 ft, 15½ cas 100 ft, 9¾ cas 3950 ft, top lower Cretaceous 4000 ft, top marl 2482 ft, top chalk 2537 ft, tested est 1 mil ft gas through ds 4390 ft, pumped in 1000 sacks cement to shut off sw from 4300-34 ft, wo cement, td 4428 ft; Bowman-Hicks 20, nw nw 4-7-12, 10-inch 101 ft, cemtd 7-inch cas 2437 ft, td 2445 ft. G. M. LeGrand's Peterson 1, sw ne 34-7-13, 10-inch 40 ft, sd 2243 ft; McGough 1, 3-8-10, dk. O. J. Baird's Duggan 1, se nw se 14-7-11, 6-inch 2410 ft, dry wo 2545 ft. W. F. Lacey's McNeely 1, ne ne 14-7-11, sp dr 300 ft. Pelican Nat. Gas Co.'s Buckley 1, sw sw 6-7-10, 10-inch 100 ft, dr 1800 ft. Beene et al's Ezernack 1, sw ne ne 2-7-13, dr 800 ft (corrected depth). Abney & Davidson's F. Martinez 1, ne nw 11-7-13, rig. Ruston Drilling Co.'s McGehee 1, sw sw 28-8-12, 10-inch 100 ft, cemtd 6-inch 2220 ft. Rush & French's Martinez 1, ne nw nw 11-7-13, 10-inch 100 ft, cemtd 6-inch 2066 ft. Farrell et al's Haley 1, 6-7-12, rig. C. H. Tuttle's Byrd 1, nw nw 7-7-10, sp 10-inch 100 ft, dr 800 ft. Service Royalty Co.'s Byrd 1, sw nw 7-7-10, sp 10-inch 102 ft, dr 1400 ft. J. E. Smitherman's Smith 1, sw nw 7-7-10, rig. Baird & Stone's McNeely 1, 14-7-11, dk. Mansfield Hdw. Lbr. Co.'s Fee 1, sw se se 36-8-13, dk. Ohio Oil Co.'s Bowman-Hicks 14, nw sw 3-7-12, rig.

TENSAS PARISH—A. R. Willis' Curry 1, 39-11-12e, sd 3545 ft. Stovall Drilling Co.'s Miller 1, ne sw 10-10-10e, lcn.

ARKANSAS

CLAY COUNTY—S. C. Jeffus, Tr.'s, Underwood 1, 4-20-8e, sd 1260 ft.

CLEBURNE COUNTY—Frank S. Craver's Donithan Lbr. Co. 1, 33-11-9, sd 3740 ft.

CLEVELAND COUNTY—Crum & Stilwell's Bell 1, 10-10s-12w, rigged up and sd.

COLUMBIA COUNTY—Kendall Oil Co.'s Fullenwider & Kitchen 1, ne ne 13-17-22, sd 814 ft.

DALLAS COUNTY—Zepp O&G Co.'s Hillman 3, nw ne 20-10-13, lcn. Jno. James, Tr.'s, Fordyce Lbr. Co. 1, 11-9s-15w, sd 2520 ft.

DREW COUNTY—Cooperative Dev. Co.'s Ogles 1, ne nw 35-15-5, sd 1890 ft.

HOT SPRINGS COUNTY—Starr Oil Co.'s Cunningham 1, 11-5-16, 12½ cas 62 ft, sd 1262 ft, shale and bldrs.

LINCOLN COUNTY—L. B. Cook, Tr.'s, McGehee Pltg Co. 1, 5-8s-7w, sd 2800 ft.

LITTLE RIVER COUNTY—Geo. Stephens et al's Dierks Lbr. Co. 1, ne nw 29-12s-31w, 10-inch 21 ft, top anhydrites 2217 ft, top Dierks limestone 2542 ft, dr 2551 ft shale and lime. Fay Roberts Oil Co.'s Russell 1, 25-12-29, lcn.

LOGAN COUNTY—M. W. Greesom's Parks 1, 21-8-24, sd 1309 ft. J. H. Flowers' White 1, 13-5-26, sd 3610 ft.

MILLER COUNTY — W. E. Noel et al's Dickson 1, 11-20-27, sd 1955 ft shale and gmbo. Fitzwater et al's E. L. Beck 1, sw se 33-15-26, sd 2220 ft.

OUACHITA COUNTY—W. H. Copenhaver et al's Berg 1, se se 13-15-17, 10-inch 42 ft, sd 2011 ft.

PIKE COUNTY—Henderson et al's Tilyou 1, 26-8-24, ta 2920 ft. Kentucky-Ark. O&G Co., Inc.'s, East 1, 13-9-23, 10-inch 288 ft, sd 709 ft.

PRAIRIE COUNTY — Powell Creek O&G Co.'s Kloss 1, ne nw 3-4n-6w, partly rigged up and sd.

SCOTT COUNTY — Heavener O&G Co.'s Reser 1, 36-4-26, sd 1536 ft. Waldron O&G Co.'s J. G. White 1, 17-3n-29w, sd 1860 ft (second hole).

SEBASTIAN COUNTY—M. W. Greesom's Spears 1, 9-7-29w, sd 1536 ft.

SEVIER COUNTY — Tri-State O&G Co.'s Bank of DeQueen 1, 34-8s-32w, sd 950 ft.

UNION COUNTY — Southern Prod. Co.'s Wingfield 1, 16-19-15, sd 2608 ft. Lion O. R. Co. et al's Guy P. Hayes A-9, ne ne 4-16-15, elev 96 ft, sd acct high water while trying to recover hung ds, td 7255 ft salt. Drillers Oil & Dev. Co.'s Pickering 1, 1-17-16, 65s cas 2128 ft, plugged back to 2135 ft to shut off sw, td 2160 ft. Modisette et al's Union Sawmill 1, sw nw 13-18-13, 10-inch 167 ft, top sand 2266 ft, tested sw slight show oil through ds 2266-80 ft, sd 2280 ft. Hill et al's Barnes 1, ne ne 21-19-15, dk.

WASHINGTON COUNTY—C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft.

YELL COUNTY—T. Luckett's Balcon 1, 36-7,12- ta 5640 ft.

MISSISSIPPI

CHICKASAW COUNTY — Hightower & Golson's Fleming 1, 20-13n-3e, ta 1640 ft.

HINDS COUNTY (Edwards Dist.)—Miss. Miss. Oil Co.'s Edwards Land Co. 1, sw ne, 23-6-4w, dk.

JASPER COUNTY (Bay Springs Dist.)—Bay Springs Pet. Co., Inc.'s, J. H. Keyes 1, nw ne 21-2n-10e, sd 2951 ft, Wilcox.

LAMAR COUNTY (Purvis Dist.)—Stauffer & Kouri, Tr.'s, Bond 1, se ne 18-2n-14w, dk.

LOWNDES COUNTY—Lowndes County O&G Co.'s Carr Est. 1, 34-17-16e, rig.

MONROE COUNTY (Amory Dist.)—Amory Dev. Co.'s Bourland 1, 2-15-19, ta 3007 ft brown sand. P. J. McAlpine's Cowart 1, 2-12s-19w, 5 3/16-inch cas 3420 ft, ta 3793 ft, brown sandy lime.

NEWTON COUNTY (Newton Dist.)—Dalton Dev. Co.'s Majure 1, se se 26-6n-11e, 10-inch 295 ft, sd 1420 ft.

NOXUBEE COUNT (Macon Dist.)—Thompson O&G Synd.'s Donahue 1, se ne 25-16n-17e, elev 280 ft, 12½ cas 20 ft, 8¼ cas 1605 ft, hf alkali water, sd 1735 ft; Ames 1, nw nw 24-16-18e, dk pat.

RANKIN COUNTY (Jackson Dist.) — Atkisson & Dyer's Valentour 1, nw nw 18-5-2e, elev 270 ft, sd wo cas 2428 ft. Majestic O&G Co.'s Elton Lbr. Co. 1, 10-4n-3e, dk.

SCOTT COUNTY—Culley et al's Owen 1, 2-8n-9e, dk.

SHARKEY COUNTY — United Gas Pub. Serv. Co.'s Lenhart 1, 660 ft nor s line section 14-14n-6w, dk pat.

WARREN COUNTY (Vicksburg Dist.)—Eagle Lake O&G Co.'s Kiger 1, sw ne 9-18-2e, sd 2607 ft.

WEBSTER COUNTY — P. J. McAlpine's Henley 1, se nw 15-21-11e, cored gravel, sd 1800 ft.

ALABAMA

MADISON COUNTY — Tennessee Valley O&G Co.'s Fee 4, 1-4s-2e, no report.

SUMTER COUNTY (Livingston Dist.)—Forked Lightning O&G Co.'s Nixon 1, 30-20-2w, dk.

WASHINGTON COUNTY—Hobson et al's Hobson Bros. 1, 9-8-2w, ta 1450 ft. Oscar Brown's U. S. Land & Cotton 2, 25-3-2w, ta 700 ft.

TENNESSEE

CHESTER COUNTY—Gilmore et al's Scott 1, arr set 10-inch cas 562 ft sand (cable tool job).

DECATUR COUNTY—Chester County O&G Co.'s Montgomery 1, sd 2521 ft (contract depth 2500 ft).

OKLAHOMA

ALFALFA COUNTY—T 27n, R 11w, Sec. 12, Smith Bros., Forbes 1, ne c se nw nw, sd 1420 ft.

KAY COUNTY—T 27n, R 2e, Sec. 9, Mummer et al, Sornick 1, nw c se, hfw 2070-2170 ft, sd 3693 ft.

GRANT COUNTY — T 25n, R 4w, Sec. 22, Cowden, Vollmer 2, ne c se ne sw, lost tools sd 5640 ft.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey et al, Acre 1, c sw ne, sd 5502 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer, White 1, se c nw, sd 5850 ft.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma Pet. Co., Phillips 1, c nw sw, sd 5120 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healey et al, Quier 1, se c sw, sd 3970 ft.

KAY COUNTY—T 28n, R 3e, Sec. 24, W. H. Atkinson et al, Hayes 1, se c ne, dr 1800 ft.

PAWNEE COUNTY—T 20n, R 5e, Sec. 6, W. A. Rookstool, Berry 1, nw c, ne sw, sd 1951 ft.

LINCOLN COUNTY—T 17n, R 5e, Sec. 36, W. M. Mote et al, School land 1, nw c, sd 1160 ft. T 14n, R 3e, Sec. 2, Hilton Phillips et al, Phillips 1, sw c nw, td 4842, dr by at 3402 ft, will probably skid.

CREEK COUNTY—T 14n, R 7e, Sec. 18, Cal-Cul Oil Co., Hollyman 1, se ne se, dr 615 ft.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Pattison et al, McDuff 1, sw nw se, td 5902 ft, D&A. T 7n, R 14e, Sec. 34, Tape Oil, Fulton 1, se c, sd 1200 ft.

LATIMER COUNTY—T 6n, R 19e, Sec. 16, P. English et al, Weaver 1, c nw se, sd 1542 ft.

ATOKA COUNTY—T 1n, R 13e, Sec. 31, T. J. Campbell et al, Baird 1, nw c ne sw, machine. T 1n, R 15e, Sec. 6, Edgerton et al, Rolland 2, sw c ne sw, machine removed, loc abn.

OKLAHOMA COUNTY—T 12n, R 4w, Sec. 17, C. F. Cuniff, St. Joseph 1, sw c ne sw se, sd 6700 ft.

SEMINOLE COUNTY—T 10n, R 6e, Sec. 19, Bunte et al, Bruner 1, se c nw, rig.

POTTAWATOMIE COUNTY—T 6n, R 4e,

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Sec. 2, Mid-Continent, Farmer 1, sw c nw, sand 4418-20 ft, 3500 ft water, show oil, to set 6-in.

ROGER MILLS COUNTY—T 12n, R 24w, Sec. 23, Ute Oil, Williams 1, c sw, sd 5150 ft. T 11n, R 26w, Sec. 4, J. J. Rook and Palmer, Davis 1, c nw ne, (owd) sd 3240 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey, Robinson 1, c ne nw, sd 150 ft.

WASHITA COUNTY—T 8n, R 19w, Sec. 29, Cooper & Terhune, Blocker 1, nw c sd 2757 ft. T 6n, R 18w, Sec. 21, Burns & Prince, Dock 1, sw c, sd 1106 ft.

GREER COUNTY—T 7n, R 22w, Sec. 1, Good & Dowell, Cliffell 1, nw c, sd 1745 ft. T 7n, R 21w, Sec. 23, H. A. French et al, Murphy 1, sw nw se, sd 1654 ft

CADDO COUNTY—T 5n, R 9w, Sec. 6, Mid-Kansas & Ramsey, Culp 6, nw c ne, td 10,079 ft, bailed small show oil and gas, pb 8880 ft, shot 130 qts bailed no show, pb 7291-7730 ft shot 100 qts show gas, rust and pb 6094 ft, ripped pipe, 6077-6089 ft show some gas.

COMANCHE COUNTY—T 4n, R 12w, Sec. 33, Snodgrass et al, Willetts 1, ne c nw, sd 305 ft.

GARVIN COUNTY—T 2n, R 2w, Sec. 24, Malernee, Phillips 1, ne c sw, sd 4800 ft.

COAL COUNTY—T 1s, R 8e, Sec. 2, Rabial Oil Co., Richardson 1, ne nw, sd 1450 ft.

ATOKA COUNTY—T 3s, R 10e, Sec. 18, Brookshire et al, Guinn 1, nw c, sd 1540 ft.

LOVE COUNTY—T 6s, R 2e, Sec. 27, Batson, Stanitt & Autry, Cross 1, ne c nw, ne, sd 1651 ft.

BRYAN COUNTY—T 7s, R 10e, Sec. 8, Bryan Oil Co., Childs 1, ne c se sw, sd 660 ft.

KANSAS

SUMNER COUNTY—Trees Oil Co. & Shell, Springate 1, ne se sw, 6-34-2e, sd 2565 ft.

KINGMAN COUNTY—Panhandle Drlg. Co., Wetherall 1, c se nw sw, 20-28-10w, spd.

STAFFORD COUNTY — Rosenthal, Stanolind, Amerada, Gray 1, c ne, 11-34-13w, td 4052 ft, hfw, s.o.

HARVEY COUNTY—Liggett et al, Davis 1, c sw se ne, 7-24-1e, sd 2500 ft.

FINNEY COUNTY — National Ref. Co., Wells 1, sw c 12-23-30w, dr 3610 ft.

McPHERSON COUNTY—Twin Drlg. Co. et al, Farver 1, sw se, 16-20-1w, dr 2000 ft.

BARTON COUNTY—Skelton Oil, Ott 1, c se se, 16-19-14w, sd 3375 ft.

RICE COUNTY—Gypsy, Steckel 1, c ne nw, 31-19-10w, dr 1000 ft.

McPHERSON COUNTY—Shell, Johnson 1, se sw sw, 35-19-3w, chat 2984 ft, c. o.

RUSH COUNTY—Shelton-Schleagel, Brock-Hartman 1, sw se nw, 4-18-16w, spud and sd.

BARTON COUNTY—Syndicate Oil, Boertz 1, c nw se ne, 13-18-12w, 5-inch 3506 ft, sd 3523 ft.

MORRIS COUNTY—Allender et al, Wycoff 1, c sw se, 5-17-7e, sd 105 ft. Urschel et al, Bersuch 1, c nw se nw, 10-17-7e, td 915 ft, fsh bit.

ELLSWORTH COUNTY—Raymond Gear et al, Sauberli 1, c sw se, 29-16-9w, sp and sd.

MORRIS COUNTY—Hankenson et al, Cessnum 1, sw se, 24-17-9e, sd 2625 ft.

RUSSELL COUNTY — Tom Palmer et al, Pasek 1, c se, 3-14-11w, dr 1120 ft.

OSAGE COUNTY—Riggs-Smith, Wood 1, c se nw, 31-14-15e, td 2200 ft, 8¼-inch at 2100 ft.

RUSSELL COUNTY—James Brennan, Walz 1, cwl e½ nw 29-13-11w, rig. Twin Mounds Oil, Weis 1, c w½ ne nw, 30-13-4w, (owd), td 2710 ft, sd.

DICKINSON COUNTY—Severs et al, Livingood 1, ne sw, 13-13-2e, sd 4752 ft.

SHERIDAN COUNTY — Flo et al, Shoemaker 1, se sw sw, 27-27-26w, hfw 4040-45 ft, td fsh bit.

WASHINGTON COUNTY—Sincox, Penwell 1, nw se nw, 16-3-3e, sd 1720 ft.

RAWLINS COUNTY—Danciger et al, Unknown 1, sw c, 3-2-35w, 6-inch 3875 ft; hfw 3925 ft, sd.

COLORADO

ADAMS—Hills Dome Lease Dev. Co., se 27-3s-64w, sd 3790 ft.

ARAPAHOE — McDeb Drlg. Co., Fitzsimone 1, ne 7-4s-66w, dr out plug at 5875 ft.

BOULDER—Julius Williams, Deggs 1, 6-1n-71, dr 944 ft. Ahlstrand et al, Woodley 1, nw 8-3n-70w, dr 555 ft, last report.

ELBERT—Belmont Oil Co., sw 27-3n-64w, sd 3745 ft to standardize. Progressive O&L Co., Pease 1, se 27-10s-66, sd 3820 ft.

EL PASO—Gulf States Oil Corp., Carson 2, ne 10-16-66, sd 1125 ft.

GRAND—Oil Mineral Lands, Inc., McElroy 1, sw 14-2-81w, stand 545 ft.

JEFFERSON—Ruby Hill O&G Co., Braden 1, se 34-4s-69w, prep to res 4106 ft.

LA PLATA—McGarr Pete Co.'s Mesa 1, ne 34-33-12, rig up. Klem Pete Corp.'s Olbert 1, sw 9-35-12w, stand 3125 ft. J. W. Irwin & Co.'s Doescher 1, nw 29-33n-13w, sd 3175 ft. Phipps et al, sw 9-33-13, dr 520 ft.

LARIMER—Mayer et al, Reed 1, nw 28-4n-69, dr and ur 6⅝-inch 2559 ft. Natural Gas & Oil Co., Meade 1, se 17-4n-69w, rigging up to dd from 60 ft. Colo. Prod., Inc., Foster-Motz 1, se se 17-4-69, run 6¼-inch, td 1435 ft. Colo. Prod., Inc., Hogsett 1, se ne 21-3-61, to test at 700 ft. C. Leonard Smith's State 1, 36-12n-70, cem cave, td 760 ft. Poudre River Oil Co., se nw 34-8b-69, run 8¼-inch 1996 ft. Consolidated Drlg. Co., Maxwell 1-A, ne 25-8n-70, to res at 285 ft.

LINCOLN—Eastern Colo. Oil Corp.'s State 1, 36-14n-57w, fsh tools, td 3449 ft.

MOFFAT—Ohio Oil So., Bogenschultz 1, se 9-6n-91, dr 1250 ft.

MORGAN—Badger Creek O&G Co., sw 2-2-57, stand 1340 ft. Colo. Ass'd Oil Co., Pumphrey 1, se 14-5n-59e, plug to abn, td 6175 ft. Tulsa-Ft. Morgan Oil Co., Smith 1, nw 18-6n-60w, location. Myers et al., Lee & Lusby 1, sw 6-2n-56w, cellar.

PARK—South Park O&G Co., Milligan 1, se 13-8s-76w, dr below 2675 ft. South Park O&G Co., Esche 1, ne 5-9s-76w, sd 2442 ft.

PUEBLO—Anchor Oil Co., Esely 1, sw 35-22-67, sd 820 ft.

RIO BLANCO—California Co.'s Raven 1, se 20-2n-102, dr 3439 ft. Magnolia Pete Co.'s Maddock 1, se 9-2s-96w, dr 2465 ft.

ROUTT—Mid-Colo. Pete Corp., Omholt 1, se 29-4n-87, sd 1700 ft.

WASHINGTON—Middlemist Oil Co., Middlemist 1, se 14-4-56, stand with 12½-inch set at 1503 ft.

WELD—Reiter-Foster's Wilson 1, se 24-6n-61w, sd 430 ft. Retter Oil Co., Smith 1, 14-1n-68w, dr bel 1380 ft. Conoco, Gadbois 1, sw 24-6n-61w, dr by tools 6595 ft. Greeley Oil Co., Gadbois I-B, nw 25-6n-61w, co, swbd 50 bbls after a shot. Gulf States Oil Corp., Bengston 1, nw 6-4n-63, location. Prairie O&G Corp.'s O'Toole 1, ne 33-7n-62w, sd 7260 ft, wait for heavier mud. Ft. Morgan Oil Co.'s Smith 1, nw 18-6n-60, location.

MONTANA

CARBON—Corbett Roy. Co., sw se 1-6s-23e, show oil at 1100 ft. Jack Creek O&G Co., 1, se 15-7s-23e, td 1325 ft. Ohio Oil Co., Kutchinski 1, 15-7s-21e, rigg ng rotary.

CARTER—E. T. Moorehead, sw 36-4s-57w, sd.

CASCADE—Buscher & Cassady, Johnson 1, se 19-22-3e, prep to res, td 1380 ft. Charles Merz et al's Sheffels 1, nw 4-21-4e, dr 900 ft.

FERGUS—Melton Corp., 1, sw 24-21n-17e, dr 3100 ft last report. Lanheim-Romunstad 2, ne 3-17n-20e, set 6⅝ inch at 2116 ft, sd 2600 ft.

GALLATIN—Mont. Gas & Pete Corp., Adams 1, 35-1n-2e, stand 527 ft. Gallatin Valley Oil Co., Haglund 1, sw 13-34-6w, sd 2539 ft.

GLACIER—Fulton Blackfeet Oil Co., ne 28-36-12w, dr 2865 ft.

GOLDEN VALLEY—Golden Valley Oil Co., 28-6n-22, dr 2800 ft.

LIBERTY—Northland O&G Corp., Yurman 1, sw 32-33-5e, resum at 3785 ft. California Co., Ross 1, ne 3-33-6e, dr and carry pipe 2280 ft.

MUSSELSHELL — Minn-Flatwillow Pete Co.'s 1, sw 7-11-31e, to res., td 2556 ft.

SWEETGRASS—Shoshone Cons., nw 23-2n-15e, strrng around 5500 ft, last report.

TETON—California Co.'s Sullivan 1, nw 34-28-7w, pull cas to see if parted, td 2810 ft. Earl Oil Corp., Gad 1, se 22-22-8w, dr 2850 ft.

TOOLE—Oregon Synd., se 20-36-2e, ur to lower cas 2268 ft. Western Nat'l Gas Co., nw ne 26-37-4e, run 6-inch to bottom, will tube and test, td 1813 ft.

YELLOWSTONE—Pan-American Oil Synd., 23-2s-24e, below 2360 ft last report. Peter Antonioli, ne ne 21-2n-25e, td 2150 ft.

WYOMING

CARBON—Midwest Ref. Co., U. P. 27, 27-11-81, sd for winter. Prairie O&G Co., Hill 1, 29-27-87, sd for winter at 6147 ft.

CONVERSE—John Ackard, se 24-33-72, dr 1820 ft.

CROOK—Northwestern Oil & Natural Gas Co., 6-54-60, sd 1585 ft for winter.

FREMONT—Wiebolt et al, 35-33-99, dr 2175 ft last report. Ward O&G Co., 28-34-90, new location. Yellowstone Oil Co., sw 14-38-94, dr 1000 ft last report.

LINCOLN—Wyo. Prod. Co., 14-24-113, td 1700 ft.

NATRONA—Midwest's 11, nw 32-34n-77, rigging to resume at 5340 ft. Summit Oil Co., 21-33-80, set cas 1387 ft. Wyo. Imperial Oil Co., sw 13-33-79, rig up, mvg in materials.

NIOBRARA—Fall River Royalties & Internat'l O&R Co., Joint Globe 1, 2-39-61, sd 600 ft.

WASHAKIE—Ohio Oil Co., lot 14, 19-45-92, recem liner at 7475 ft to test second Frontier. Bales Oil Trust, nw 31-48-80, sd for winter at 1100 ft.

WESTON—LeFaivre Oil Synd., se 29-45n-68w, stand at 1800 ft. Julius Peters et al, Weitzell 1, se nw 30-46-84, co at 3400 ft, to dr 100 ft deeper. Stockade Anticline Synd., 32-45-60, sd. Gose Oil Synd., Gose 1, 28-47-65, sd 5050 ft.

PATENTS

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ROOM with BATH $2.50

New — Fireproof — Convenient

Nearest Hotel to Penna. R.R. To. minal.

NEW MEXICO

BERNALILLO — Norrins Realty, Pajarito Grant 1, 29-9n-2e, dr 1207 ft.

CHAVEZ—Warman Oil Trust, Evans 1, 15-14s-25e, dr 685 ft.

DE BACA—Matador Oil Co., Wood 1, ne 6-4n-20e, dr 3438 ft. Landowners Oil Co., State 1, ne 16-1s-27e, fsh tools 4664 ft.

GUADALUPE—N. M. Prod. & Ref. Co., McMillan 1, 24-5n-16e, dr 3881 ft.

LUNA—Angelus O&M Co., State 3, se 20-21-10, try to cem at 4275 ft, td 6155 ft.

OTERO—Ernest et al's se 20-25s-7e, stand 1445 ft. Pasotero Oil Corp., Evans 1, sw 32-5s-30, rig.

RIO ARRIBA—Berrenger et al's Hartman 1, ne 8-29n-7w, sd 825 ft. Governador Oil Co.'s 1, 15-29n-7w, run 5 3/16-inch at 1960 ft.

ROOSEVELT—Peterson et al, Good 1, 32-5s-30e, rig up.

SAN JUAN—Kutz Canon O&G Co., Day 1, se 20-28n-10w, sd 3742 ft. Rio Grande Dev. Co.'s 2, 9-26-11, sd 1771 ft. Continental Oil Co.'s Rattlesnake 24, 1-29n-19w, dr 6198 ft. San Juan Leaseholds, Bowman 3, nw 30-30-15, sd 2695 ft. Williams et al, Stallings 1, sw 17-25n-15w, standing 150 ft. Dorothy Oil Co.'s Terwilliger 2, se 29-30-9, indefinitely suspended.

SANTA FE—Jones, Owsley et al, 5-10-9e, sd 435 ft. N. M. Securities Co., sw 6-10n-17e, sd 480 ft.

SAN MIGUEL—Starr Oil Co., Adams 1, ne 25-17n-16e, fsh pipe 5095 ft. Hershfield Dev. Co., Cabra Springs 1, ne 21-12n-22e, recem 12½-inch 1370 ft, td 1550 ft.

NORTHERN CALIFORNIA

KERN COUNTY

ANTELOPE VALLEY—Meridian Oil Co.'s No. 1, 11-9-15, sd 3970 ft.

BUTTONWILLOW — Graham-Loftus Oil Co.'s Carmel 1, 20-27-22, dr shale 5768 ft. General Pet.'s Morris 1, co and circulating 2615 ft. Milham Exploration Co.'s Crites 1, 8-28-23, sd 4496 ft.

DEVIL'S DEN—Cumberland Oil Co.'s Cumberland 2, 17-26-18, dr shale 3163 ft.

EL TEJON—Descanso Oil Co.'s Tejon 1, 31-11-19, rigging up rotary.

McKITTRICK—T. H. Purman's No. 1, 22-29-21, dr shale 2350 ft. Welport Oil Co.'s No. 8, 25-29-21, dr shale 717 ft.

SEMITROPIC — Fullerton Oil Co.'s Core Hole B, 25-27-23, dr shale 2375 ft.

WHEELER RIDGE—Barnsdall Oil Co.'s K. C. L. 1, 15-11-20, dr shale 1960 ft.

SANTA BARBARA COUNTY

CARPENTERIA—Texas' Core Hole No. 1, 34-4-24, dr shale 300 ft.

GOLETA—General Pet.'s Hollister 1, 3-4-29, lcn; More 3, 22-4-28, swabbed water above plug at 5225 ft, shot and pulled 4¾-inch liner above 5200 ft, will continue test. Strickland and Tippett's Duncan 1A, 19-4-27, will run surface cas, td 4885 ft, to make test.

LOS ALAMOS—Barnsdall's Careaga 1, 31-8-33, rigging rotary. N. S. Wilson's Orena 1, 2-7-33, co 3450 ft.

SANTA MARIA—Western Gulf's Bradley 1, 8-9-33, sdtr fish, td 8566 ft.

VENTURA COUNTY

CONEJO—Triunfo Oil Co.'s No. 1, 24-1-19, dr shale 2500 ft.

HOPPER CANYON—Bardeen Oil Co.'s Lankershim 1, 13-4-19, pumping 200 bbls, td 2430 ft; Lankershim 2, rig.

OJAI—A. N. Macrate's Cosmon 1, 27-4-23, grading for lcn.

PIRU—Torrey-Ventura Oil Co.'s No. 1, 32-4-18, dr shale 900 ft.

RINCON — Continental's Grubb 1, 22-3-24, flowing 300 bbls, td 6750 ft.

SANTA PAULA — San Pedro-Pt. Fermin Synd.'s Kellerman 2, 13-4-21, pumping 175 bbls, td 3850 ft.

SHIELLS CANYON—Union's Calumet 1, 3-3-19, lcn.

SIMI—R. R. Renaud's Marr 17, lcn.

SOUTH MOUNTAIN—H. H. Bell's No. 1, 22-3-21, dr shale 2035 ft.

MISCELLANEOUS

FRESNO COUNTY—Kingsburg Exploration Co.'s Muller 1, 29-16-23, sd 2350 ft.

KINGS COUNTY—Knudsen and Schmidt's Avenal 1, 36-23-17, coring hard sand 5033 ft. Eagle Oil and Gas Co.'s No. 1, 15-23-20, will deepen from 555 ft. E. B. Guess' No. 2, 12-23-22, dr shale 1450 ft. Irma Investment Co.'s

INCREASE PRODUCTION with a Miller Sand Pump

With the enormous suction in the Miller Sand Pump you bring out a load of sand and mud each time you run. You can depend on it to thoroughly clean your well in a very little time. You have your choice of four types of bottoms: Chisel, Bailer, Star, and the regular Sand Bottom — all interchangeable.

CHISEL BOTTOM

will save the expense of running tools and its chisel shape breaks up tightly packed sands.

BAILER BOTTOM

will speed up production in cavy holes by time saved in picking up cuttings.

STAR BOTTOM

used for cutting the sand loose and preferred by some to the Chisel Bottom.

SAND PUMP

Bottom illustrated in position in the pump.

Write for Price List

MILLER SAND PUMP COMPANY

Factory and General Office

SAPULPA, OKLA., U. S. A.

The McEvoy Universal Tubing Retractor makes it possible to repair Christmas Tree without killing well

WORKERS FIGHTING HUGE OIL WELL FIRE

East Texas Blanketed by Smoke From Blaze

LONGVIEW, Texas, Dec. 22.—An oil well fire that threatened to become the greatest in East Texas history today leaped and bellowed and flung a huge blanket of black smoke across the countryside.

The flames, fed by a leaky "Christmas tree" connection, already have reached a height of 60 feet. Their roar could be heard almost half a mile away and the heat was so intense that only workmen wearing asbestos suits could approach within 100 yards.

The well is the Clark & Cowden No. 1 Wilhute, eight miles north of here. It caught Sunday when oil from a shattered pipe line ignited from a friction spark. Yesterday a burning tree fell across the mouth of the well, breaking the Christmas Tree connection and permitting a large flow of oil and gas.

The burning well is about three miles from the Sinclair-Cole No. 1 well, which caught fire last spring and killed nine men.

The Retractor makes it possible to quickly shut in a well even if a fire has started!

Use the McEVOY RETRACTOR to get the comfortable feeling of safety.

J. H. McEVOY & CO.

TEXAS AVE. at MILBY • HOUSTON, TEXAS

Watson 2, 7-23-20, will plug back from 1225 ft. Tulare Basin Gas Co.'s Goodfellow 1, 2-23-19, co 975 ft. Valley Exploration Co.'s Dudley 1, 12-23-19, 9⅝-inch cas cmt 975 ft, td 1302 ft.

MONTEREY COUNTY—Pacific Inland Oil Co.'s No. 1A, 19-23-15, sd 2245 ft.

SAN JOAQUIN COUNTY—Union's T. L. W. No. 1, 14-3-6, dr shale 3065 ft.

SAN LUIS OBISPO COUNTY—Kent and McDonald's No. 1, 3-32-22, co 2462 ft. Emerich Oil Co.'s No. 1, 10-inch cas cmt 1610 ft, td 1715 ft. Indian Dome Oil Co.'s No. 1, 26-31-12, co 3375 ft. J. D. Martin's Pricco 1, 5-31-13, dr 3006 ft. Paso Robles Synd.'s Emerich 1, 34-27-11, co 4027 ft.

TULARE COUNTY — Gravity Exploration Co.'s Hudson Buck 1, 11-24-13, rig. Ellis and Sanford's No. 1, 20-24-23, co 1920 ft. E. B. Guess' No. 1, 7-21-21, re-dr 6200 ft. Tulaco Oil Co.'s No. 1, 17-22-22, rig.

SOUTHERN CALIFORNIA

CALABASAS—L. W. Rucker's No. 1, 26-1-17, dr shale 738 ft. Simi Oil Co.'s Hearst 1, 18-1-7, dr shale 4930 ft; Hearst 2, 18-1-17, sd 255 ft.

COYOTE PASS—Davidson Oil Co.'s Fee 1, 32-1-12, lcn.

EL NIDO—L. C. Hunt's No. 1, 29-3-14, lcn. Mohawk Pet. Co.'s Pavey 1, 29-3-14, dr shale 3825 ft.

FULLERTON — Standard's Bastanchury 1, 23-1-10, plugged to 5884 ft, pumping 100 bbls 29 gravity oil, td 8144 ft.

MONTEBELLO — Wardell and Menichini's No. 1, 7-2-11, rigged to sp.

NEWPORT—Ajax Pet. Co.'s B. G. 1, 16-6-10, dr hard sand 6685 ft. Nuoil Co.'s Banning 1, 29-6-10, pumping 40 bbls 15 gravity oil, td 1975 ft. Orange County Refining Co.'s No. 5, sd 1825 ft.

OCEAN PARK—Hines Pet. Corp.'s Happy Days 1, 8-2-15, running formation tester, td 7406 ft, will clean out to bottom.

PLAYA DEL REY—Cooperative Development Co.'s No. 1, 26-2-15, rig.

WILMINGTON—Ranger Pet. Co.'s Watson 2, 21-4-13, will swab for production test, td 3785 ft.

▼ LETTERS ▼

A friend of mine who is prominent in the oil industry called my attention to your kindness in printing the paper "Stresses in Wire Rope Drilling Lines," [January 1, 1932, p. 22] for which I thank you.

This is a very difficult piece of typography, and in looking through article as it appears in THE OIL WEEKLY I notice two or three slips, the most important of which is the "pieing" of the equation at the top of the second column of page 30. The next is the omission of the square of d in the equation $4A\ 1.6d^2$ in the fourth line from the bottom of column one on page 26. Aside from this I compliment you upon an excellent presentation of an article which I trust will bring forth sufficient discussion to repay us for the effort of making the matter public.

If you can spare a copy or two, I request them for my files. Should it appear worth while I will be glad to aid you with answers to any questions that your readers may submit, even to the extent of finishing the paper by introducing the effect of the lateral vibrations and the wear of the line due to this cause.

FRED C. CARSTARPHEN,
Consulting Engineer.
721 Marion Street, Denver, Colorado.

New Equipment for the Field

MACHINERY - TOOLS CATALOGS - BOOKS

▼ ▼ ▼

1. Tubing Liner Bit

PATTEN TUBING LINER BIT COMPANY

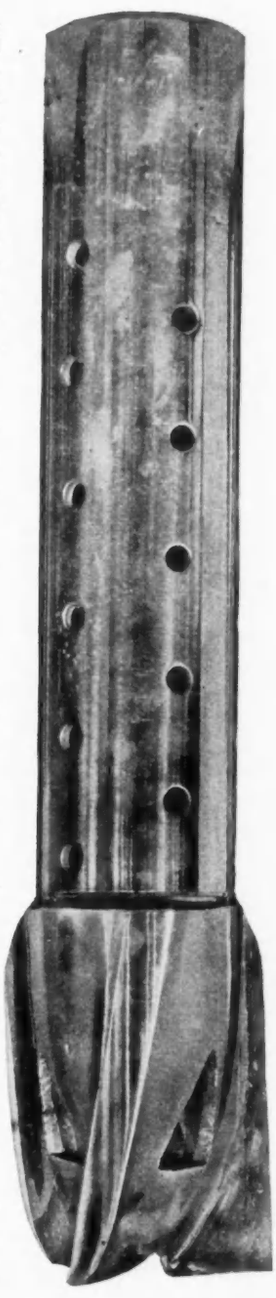
Patten Tubing Liner Bit Company, Houston, has designed and placed on the market the Patten Tubing Liner Bit, which is offered as a device affording economies in time, labor and money in completing, cleaning out, or deepening wells.

Embodying a three-way fish-tail drilling bit at the bottom, with perforations in the bit (and also above it in one of the two types made), the tool is screwed into the bottom of two-inch or 2½-inch tubing in completing a well; and it not only serves as a perforated liner, but by virtue of the cutting blades at the bottom it answers the requirements for drilling out the cement plugs and into the oil sand, for cleaning the well out after production ceases flowing, or for drilling deeper.

The device is made in two models, both types having the fish-tail bit at the bottom, but one type having perforations only within the bit, while the other has additional perforations above the bit, the latter being consequently of greater length to allow for the perforations.

The longer model, 2½ feet long, weighs 27½ pounds and is made in one solid piece of chrome nickel steel, the cutting edge of the blades of the bit being of "Casite" hardening. The cutters or drilling point of the bit will drill a hole 4¾ inches in diameter, thus allowing ample freedom for any upset collars on the tubing. It is stated that the perforations, including the "V" type opening in the bottom of the bit, together with the one-half-inch perforated holes above the cutting blades, equal 5¾ inches, and will amply take care of any volume of production flowing through the two-inch or 2½-inch tubing (under pressure.)

After the well has ceased flowing the hole may be deepened by rotating the tubing with tongs, the cutting bit at the bottom of the tool making the deepening possible. Used for this purpose the device saves the expense of pulling the tubing and of standardizing the well or moving in a portable rig for the deepening operation. It also saves pumping mud into the hole to prevent a blow-out and of re-running the tubing back into the hole and cleaning out the well.



Patten Tubing Liner Bit

The other type of the Patten Tubing Liner Bit, shorter and not embodying the perforations above the bit, is used on the bottom of two or 2½-inch tubing to drill into the cap or the cement plug and into the oil sand. It is left on the end of the tubing, and the "V" type holes allow ample perforation for the fluid to flow through the bottom of the bit, the openings representing the equivalent of the 2½-inch tubing in regard to the volume of fluid which can be accommodated. This bit is 12 inches long and weighs 18 pounds; is of one solid piece, being a casting out of chrome nickel steel with the cutting edge of the blades Casite hardened, the diameter of the cutting blades being 4¾ inches. This bit is being used extensively in the East Texas field, and it is adaptable in any field where similar conditions exist, or where liners and tubing are used.

The bits are being displayed and sold by T. T. Word Supply Company of Houston, and also at Joinerville, Overton, and Kilgore, Texas.

2. Aluminum Solder

ALLIED RESEARCH LABORATORIES

Allied Research Laboratories of Glendale, announce a new solder called "Alumaweld" that actually fuses or welds with aluminum to form a single piece, according to the manufacturers.

Alumaweld is made to repair aluminum, pot metal, die castings, cast iron and steel quickly and lastingly. It will repair the cylinder head or crank case of an automobile in a relatively few minutes, without even tearing down the car; it will repair pipe systems without tearing out a section—just by equalizing the pressure, according to the manufacturers, who go on to say, "Alumaweld is applied to aluminum, pot metal and die castings with an ordinary soldering iron or blow torch—the solder melts at an exceedingly low temperature, but once it is melted, requires

— — — — — — *MAIL COUPON* — — — — — —

THE OIL WEEKLY,
Houston, Texas, U. S. A.

Please see that I am supplied, without obligation, additional information on New Equipment Items Nos._____ described in the January 29, 1932, issue of THE OIL WEEKLY.

Name.....

Company.....

Address.....

a much higher temperature to melt it again. This makes it possible to withstand any ordinary heat."

Additional information on Alumaweld may be obtained by writing Allied Research Laboratories, Glendale, California.

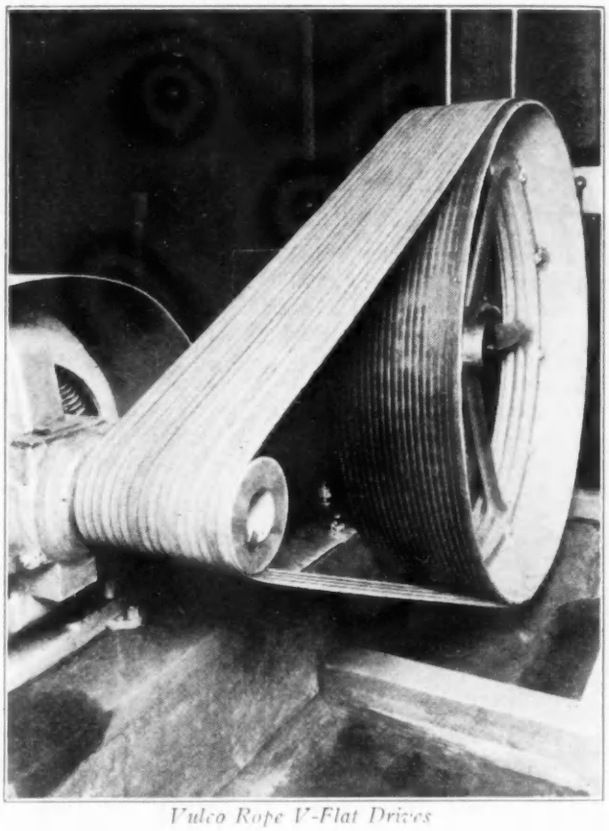
3. Vulco Rope V-Flat Drives

GATES RUBBER COMPANY

Gates Rubber Company engineers have developed a different type of application which offers more economy in installation. This application, according to the company's announcement, applies particularly to drives of reasonably high speed ratios and short shaft centers. Here is the explanation of the application which comes from the company:

Normally a multiple V-belt drive consists of two grooved sheaves and a set of belts. The wedging and locking action of the belts in the sheave grooves produces a pressure for transmitting power several times as great as can safely be obtained in flat belt drives through belt tension. This is the reason for multiple V-belt drives having such marked ability to operate efficiently with high speed ratios and short shaft centers.

Vulco rope V-flat drives are suitable for almost all power transmission requirements, especially those where high speed ratios and short shaft centers are desirable. Old flat belt, gear and chain drives may be modernized with little expense. Usually the equipment needed for such conversion will be the motor sheave and the necessary Vulco ropes, since the old flat pulley (or gear or sprocket fitted with a flat steel band)



Vulco Rope V-Flat Drives

will serve satisfactorily as the drive pulley. If not, a flat pulley of proper size can generally be obtained at a low cost.

The pump drive shown here is a typical V-flat application, showing conversion of flat belt to new V-flat application by purchasing the motor sheave and V-belts to make this conversion. Note the flat band that was shrunk on old gear.

4. Composite Rods

HAYNES STELLITE COMPANY

Haynes Stellite Company, Kokomo, has developed a special hard-facing rod for oil well drilling tools. This product is known as Haystellite Composite Rod.

This product consists of various screen sizes of sharp, irregular shaped grains of Haystellite, a cast tungsten carbide, uniformly distributed in a binding material.

Crushed Haystellite of screen sizes 4 on 8, 8 on 16, 10 on 20 and 20 on 30, and three types of binding materials—Haynes Stellite, Hascrome and High Test Steel are used. The list, which comprises ten standard rods, includes practically every screen size of tungsten carbide and type of binding material required for facing the various types of drilling tools and for the efficient drilling of the various formations.

The rod in which Haynes Stellite is used as a binding material results in a slow and uniform wear and projection of the grains of Haystellite, while the High Test steel binder results in rapid wear of the steel base between the grains of Haystellite and, therefore, a more pronounced projection of each grain.

Detailed information in regard to this product can be secured by writing to the Haynes Stellite Company at Kokomo, Indiana.

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Squeaks from the Bull Wheel

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"This is a very sad case, very sad indeed. I much regret to tell you that your wife's mind is gone—completely gone."

"I'm not at all surprised, doctor. She's been giving me a piece of it every day for 15 years."

OR FERTILIZER

"I see where Henry Ford has told all of his employes to start a garden next spring or stop working for him."

"Yes, and by that time he'll probably be in the wholesale seed business and tell them they have to buy their seed from him!"

A city girl was visiting in the country. She became rather friendly with a young farmer. One evening as they were strolling in the fields they happened across a cow and a calf rubbing noses in the accepted fashion.

"That sight makes me want to do the same," said the farmer.

"Well, go ahead," said the girl encouragingly. "It's your cow."

"Mama, I don't believe that man next door knows as much about music as he thinks he does."

Mama: "What makes you say that, Jimmy?"

Jimmy: "Well, he told me to take my saxophone apart and see what was inside of it."

"Are you looking at my knee—?"

"Aw, g'wan, you know I'm above that—."

She: "Getting mighty cold, isn't it?"

He (reflectively): "Winter *draws* on."

She: "Sir!"

"How can one make a blonde?"

"By peroxide—or gin!"

"Do you object to kissing on sanitary grounds?"

"Oh, no."

"Then, how about a stroll through the infirmary?"

"You must not expect me to give up my girlhood ways all at once."

"Certainly not, my dear. Go on taking an allowance from your father as if nothing had happened."

First Old Maid: "Do you always look under the bed?"

2nd: "Always."

"Ever find anything there?"

"Only in old-fashioned hotels."

Visitor—I have come to register the fact that my wife disappeared seven days ago.

Police—Why didn't you register her disappearance at once?

Visitor—Well, for the first few days I could hardly believe it true that she really had gone.

"What did you do with the blonde you had out last night?"

"Oh, I gave her the air. She turned out to be one of those Iowa girls."

"Whaddaya mean, Iowa girls?"

"You know—I owa a month's rent."

"The study of the occult sciences interests me very much," remarked the new boarder. "I love to explore the dark depths of the mysterious, to delve into the regions of the unknown, to fathom the unfathomable, as it were, and to—."

"Let me give you a little more of this stew, Mr. Smith," interrupted the landlady.

The visitor had been talking of aviation, when little Jane interrupted: "I was up in the air once myself, but I forget now how it feels."

"Why, Jane," spoke up her mother, "you were never in the air in your life."

"Mother," corrected Jane, "have you forgotten that the stork brought me here?"

"Did you go to the character reader?"

"Yes."

"Did he know anything?"

"Well, he made me pay in advance."

"When caught in the rain, you must be sure to change your garments directly you get home," said the teacher in a lesson on health safeguards. "My little nephew got wet while cycling some weeks ago, and he is still laid up."

"Please, sir, is any one using your nephew's bicycle?"

A fellow dialed his home telephone number.

"Hello," he said. "Is that Mrs. Brown?"

"Yes."

"This is Jack speaking. I say, dear, will it be all right if I bring home a couple of fellows to dinner?"

"Certainly, darling."

"Did you hear what I said?"

"Yes, you asked if you could bring home a couple of fellows to dinner. Of course you can, dear."

"Sorry, madam," said the fellow as he hung up. "I've got the wrong Mrs. Brown."

"Does your husband always lie to you?"

"No, some nights I'm too tired to ask any questions."

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NUMBER	VISCOSITY
91 Sun Golden	100 to 115 @ 100
98 " "	150 to 160 @ 100
92 " "	200 to 215 @ 100
93 " "	300 to 320 @ 100
94 " "	500 to 530 @ 100
95 " "	750 to 800 @ 100
90 " "	1200 to 1300 @ 100
96 " "	80 to 90 @ 210
97 Special Golden	145 to 160 @ 210

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Specializing to the Producing and Pipe Line Branches of the Oil and Gas Industry

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TEXAS PANHANDLE

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EAST CENTRAL TEXAS

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Second Failure Is Recorded in Van Field Unitized Area	April 24	81
Van Is Quiet With No Wells Drilling and No Locations	Sept. 25	58
Van Field's Lower Horizons Are to Be Explored Shortly	Oct. 2	65
Van Field's Yield Average Is 4697 Barrels Per Acre Up to October 1	Oct. 30	50
Van Field's Sand Thickness Equal to 1,171,407 Acre Feet	Oct. 30	50
Five New Tests Authorized for Van During Past Week	Nov. 13	64
Reservoir Pressure Decline at Van Presages Widespread Pumping	Dec. 4	57
Pressure Variations in Van Wells Not True Barometer, Engineers Say	Dec. 11	48
Paluxy Sand Is Eliminated in Deep Test in Van Field	Dec. 11	50

Wildcats and Miscellaneous

Shelby County Test Makes Two Heads From Austin (Chalk)	June 5	65
Shelby County Well Making Another Test of Show	June 12	66
Shelby County Holds Interest in East Texas Border Counties	July 10	60
Two Failures Recorded in East Texas Border Counties	July 17	61
Plug Drilled in Harrison County's Test of Trinity	Aug. 14	54
Harrison County Test Now Down to 5678-Foot Depth	Aug. 21	57
Abandon Harrison County, Texas, Wildcat in Lime at 5815 Feet	Aug. 28	51
Location Made for Tenth Test in Bethany Gas Field	Sept. 4	59
Shelby County, Texas, Test Makes Good Progress	Sept. 25	60
Two East Texas Border County Tests Abandoned During Week	Oct. 16	51
Shelby County, Texas, Test Resumes Bailing This Week	Oct. 16	51
Bowie County Well Shows Salt Water at 4490 Feet	Oct. 16	51
Outpost Test Is Started in Eastern Upshur County	Oct. 23	54
Shelby County, Texas, Test Now Drilling at 2460 Feet	Oct. 23	60
Shelby County, Texas, Test Gets Oil Show at 2642 Feet	Oct. 30	51
Shelby County, Texas, Test Bailed Dry With Gas Show	Nov. 13	64
Wildcat Locates New Horizon Northwest of East Texas	Nov. 20	61
Testing of Well in Jamestown Area, East Texas Field, Delayed	Nov. 27	51
Shelby County, Texas, Wildcat Makes Gasser After Cleaning	Nov. 27	58
Showdown of Jamestown Area Possibilities Is Delayed	Dec. 4	58
Shelby County, Texas, Test Makes Commercial Gas Well	Dec. 4	58
Northeast Texas Test Now Below 7130 Feet in Shale	Dec. 11	50
Shelby County, Texas, Test Fails to Get Production	Dec. 11	50
Jamestown Area Eliminated for Production in Woodbine Horizon	Dec. 18	50
Shelby County, Texas, Test Has Parted Casing Trouble	Dec. 18	51

SOUTH TEXAS

Camp Pool

Camp Pool, Guadalupe County, Records Another Fair Producer	Oct. 2	66
Humble's Camp Pool Test Is Interesting	Oct. 9	64
Camp Pool Near Darst Creek Has Three Active Operations	Oct. 16	54
Two Camp District Wildcats Get Production in Crevices	Oct. 30	53
Humble Makes Location for Second Camp District Test	Nov. 6	78
Second Camp Pool Test Shows Increase When Worked Over	Nov. 13	67
Humble Is Deepening Camp Pool Well to Increase Flow	Nov. 27	58

Damac Pool

Damac Pool Is Promised 2530-Foot West Extension	Oct. 16	53
Active Drilling Campaign in Prospect for Damac Pool	Oct. 30	52
Damac Pool Tests Hold Interest in Bee County	Nov. 6	77
Operators Watch Developments at Damac for Possible Trend	Nov. 13	67
Damac Pool Offset Test to Discovery Well Proves Dry	Nov. 20	63
Third Producer Completed in Damac Pool, Bee County	Nov. 27	55
Well in Damac Pool, Northern Bee County, Makes 500 Barrels	Dec. 4	60
Damac Extension of Pettus Field Adds Two Producers	Dec. 25	57
Expect Gasses in Bee County Well Located in Damac Pool	Dec. 18	52

Darst Creek

Darst Creek Off 2000 Barrels Daily	Jan. 2	48
New Location at Darst and Wildcat Test Hold Interest	Jan. 23	76
Darst Creek Potential Shows Slight Decrease When Gauged	Feb. 6	71
Darst Creek Inside Well Good for 1100 Barrels	Feb. 13	68
Darst Creek Yield Shows High Crude Yield Per Acre	Feb. 20	31
Drilling Again in Magnolia Crevice Well at Darst Creek	Feb. 27	89
Darst Creek Operators Open Intensive Drilling Campaign	Mar. 6	89
Darst Creek Prorated Outlet to Be Cut; Drilling Active	Mar. 13	113
Extension of Darst Creek Producing Area Is Likely	Mar. 20	72
Darst Creek Field's Latest Schedule Is 20,000 Barrels	April 10	74
Darst Creek Potential Is Now 147,503 Barrels Daily	May 8	123
Southwest Extension for Darst Creek Field Is Likely	Aug. 28	55
Darst Creek Properties Revert to Former Owner	Sept. 25	64
Producer at Darst Creek to Be Placed on the Pump	Dec. 4	59
Texas Company Completes Three Wells at Darst Creek	Dec. 11	51

Duval County

Duval County Wildcat Test Drilling Ahead	Jan. 9	62
Duval County Offset Well Strikes Oil at 2250 Feet	Jan. 16	75
Duval County Wildcat Completed as Gas Well	Jan. 23	76
Vacuum Oil Company Quits Duval County Wildcat Test	Feb. 6	73
Duval County Extension Test Appears Promising	Feb. 13	68
O'Brien Pool, Duval County, Widened 2000 Feet Southwest	Feb. 20	82
Persistence Rewarded With Second Duval County Well	Feb. 27	86
Small Oil Showing Opens New Area in Duval County	Mar. 6	89
Extend Duval County Area Quarter-Mile to Southeast	Mar. 27	82
Complete Two Large Oil Producers in Duval County	April 3	79
Schoolfield and O'Byrne Most Prolific Area in Duval County	May 15	69
Another Test Planned for Schoolfield and O'Byrne Area	Aug. 14	59
Duval County Has One New Operation and One Producer	Sept. 4	60
Drilling Activity in Four Pools of Duval County Holds Interest	Oct. 16	53
Schoolfield and O'Byrne Area Reports Several New Operations	Sept. 18	60
Schoolfield and O'Byrne Pool Gets Good Producer	Sept. 25	64
Schoolfield and O'Byrne Pool Has Two Wells Near Completion	Oct. 2	66
Schoolfield and O'Byrne Pool Has Three Completions	Oct. 9	64
Schoolfield and O'Byrne Pool Completes 400 Barrel Well	Oct. 30	53
Important Developments Feature Activity in Duval County Field	Nov. 13	66
Schoolfield and O'Byrne Pool Records Two Wells in Past Week	Nov. 20	63
Three Producers Completed in Three Duval County Pools	Nov. 27	56

Pettus

Ray-McKinney Pool Is Extended 1000 Feet East	Jan. 16	75
East Extension to Pettus Fails to Materialize	Jan. 23	75
Bee County Well Completed as Gasser, Now Making Oil	Jan. 30	243
Ray-McKinney Pool Extension Well Shows Further Increase	Feb. 13	68
Make Further Try in Bee County Area that Failed	Feb. 20	80
Bee County Well Makes Gas After Vain Attempt for Oil	Feb. 20	82
Test Seeks to Connect Pettus Producing Spots	Feb. 27	86
Showing Indicates 900-Foot Extension East at Pettus	Mar. 6	89
Two Completions Link Up Production in Pettus Area	Mar. 13	112
Pettus Operators Agree and Stay Within Allowed Output	Mar. 13	114
Opening of New Section of Pettus Field Seems Certain	Mar. 20	72
Extensions in Pettus Area Revive Interest in Field	Mar. 27	83
Pettus Gets East Extension; North Extension in Prospect	April 17	80
Original Pettus Pool Given 1292-Foot Extension East	April 24	89
Make Further Attempts to Widen Pettus Field	May 8	123
Two Important Extensions Promised in Pettus Field	May 15	69
Eastern Limit of Pettus Field Defined by Failure	May 22	68
Dry Hole Marks Eastern Limit of Pettus Field	June 5	68
Two Extension Completions Promise Campaign at Pettus	June 19	70
Interest in Pettus Field Centered in Wildcat Tests	July 3	64
Well May Extend Townsite Pool of Pettus Field Mile to South	July 10	64
United's Pettus Field Test May Go to 10,000-Foot Level	Aug. 21	61
Additional Test of Extension Pool at Pettus Appear Likely	Sept. 11	57
Pettus Extension Pool Receives New Locations	Sept. 25	63
Preparing to Complete Pettus Test, Bee County	Oct. 9	64

Refugio

Refugio Flank Deep Well Ready for Fourth Test	Jan. 16	75
Further Extensions Likely in Refugio Producing Area	Jan. 23	74
Refugio Wildcat Test May Widen Field's Production	Jan. 30	243
Refugio Extension Well Not Up to Expectations	Feb. 6	71
Refugio Field Production Increase Appears Likely	Feb. 13	67
Refugio Southeast Extension Test Showing for Production	Feb. 20	80
Refugio Well Makes Gasoline; Extension Test Holds Interest	Feb. 27	87
Refugio Placed on Smaller Chokes for Ten-Day Test	Mar. 13	112
Refugio Operators Protest One-Quarter-Inch Choke	Mar. 20	72
Gauging at Refugio Shows Actual Production Decline	Mar. 27	82
Refugio Completions Recorded in Both Deep and Shallow Sands	April 10	74
Results of Refugio Choke Order to Be Brought Before Commission	April 17	80
Refugio Deep Wells to Stay on One-Quarter-Inch Chokes	May 1	73
Refugio Field Still Most Active South Texas Area	May 15	69
United Gets Large Gasser in Deep Sand at Refugio	May 29	67
Good Oil Flow From Refugio Sand That Usually Yields Gas	June 5	69
Complete Several Small Wells in Shallow Sand at Refugio	July 3	63
Activity At Refugio Now At Lowest Ebb in Months	July 17	65
Several Deep Horizon Wells at Refugio Near Completion	Aug. 7	63
Small Producer Completed for 200 Barrels at Refugio	Aug. 14	58
Another Good Well Completed in Deep Sand in Refugio Area	Aug. 21	61
Producer Added to Deep Sand of Refugio Field	Aug. 28	54
Refugio District Continues to Be Comparatively Active	Sept. 11	58
Refugio Records One Small Well and One Completion	Sept. 18	60
Workover Well At Refugio Good for 850 Barrels Daily	Sept. 25	63
Refugio Northeastern Deep Flank Well Makes Good Flow	Oct. 16	53
Refugio Field Now Has Three Active Operations	Nov. 13	67
Refugio Completion Makes 100 Barrels of Gasoline	Dec. 25	58

Saxet

Second Oil Producer in Saxet Area Anticipated	Jan. 16	76
Second Saxet Field Well Successfully Completed	Jan. 23	76
Extension of Saxet Field Is Indicated by Promising Well	April 3	79
Saxet Field, Nueces County, Is Widened 3½ Miles to Northwest	April 17	80
Saxet Field Again Active With Three Tests Started	May 8	124
Development of Multi-Sand Field in Saxet Field Likely	May 22	68
Saxet Well Running Wild; Drilling Interesting	June 5	68
Saxet Field Deep Prospect Drowned Out by Salt Water	June 12	70
Extension of Saxet Pool, Nueces County, in Prospect	June 19	71
Main Part of Saxet Field Extended ¾ Mile	June 26	68

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Saxet Field Extended and New Producing Horizon Discovered	July 10	63
New Record Depth Set for Saxet Field, Nueces County	July 17	64
Another Failure Recorded in Saxet Field, Nueces County	July 31	110
Two-Mile Northwest Extension to Saxet Pool Seems Likely	Aug. 14	58
Two Wells Near Completion at Saxet, in Nueces County	Aug. 21	61
Plan Second Bloomington Area, Victoria County Test	Jan. 23	74
Saxet's List of Active Wells Increased to Four	Sept. 4	60
Saxet Field, Nueces County, Continues Drilling Activity	Sept. 18	60
Saxet Field Still Active; No Developments for Week	Sept. 25	63
Saxet Field's Most Prolific Deep Sand Appears Imminent	Oct. 16	54
Plug Back Saxet Field Well to Cut Off Salt Water Flow	Oct. 30	53
Interest in Saxet Field Is Centered on Deep Test	Nov. 6	78
Well in Saxet Field May Open New Deep Horizon	Nov. 13	66
Test in Saxet Field Develops Water Trouble at 4840 Feet	Nov. 27	56

Victoria County—See also Wildcats and Miscellaneous.

Plan Second Bloomington Area, Victoria County Test	Jan. 23	74
McFadden Sector of Victoria County to Get 5750-Foot Test	April 17	81
McFadden Area, Victoria County, Holds Spotlight	May 15	69
Slick Estate Gets Gas Well in Victoria County Extension	May 29	67
Completing Victoria County Gasser: Three Mile Extension	June 5	69
Victoria County Gas Well in Process of Completion	June 12	69
McFadden Extension Gasser Completed by Slick Estate	June 19	71
Extension Well to McFadden Field Turns to Salt Water	July 3	64
McFadden Field in Victoria County Adds Another Gasser	July 17	64
Victoria County Test Gives Promise of Gas at 2048 Feet	July 24	59
Victoria County Still Center of South Texas Drilling Work	Aug. 7	63
Victoria County Test Penetrates Second Sand Below 3000 Feet	Aug. 14	59
Fourth Gas Sand Struck in Victoria County Test	Aug. 21	61
Little Activity Reported for District Near Victoria	Sept. 4	62
McFadden Gas Field Is Promised Another Well	Sept. 25	64
Well On Beck Dome, Victoria County, Now Ready to Test	Oct. 2	68
Victoria County Test to Plug Hole With Cement	Oct. 9	64
Victoria County Test Now Down to Interesting Depth	Oct. 30	52
Beck Salt Dome Test Offers Real Engineering Feature	Nov. 20	63
Victoria County Test Is Now At Interesting Depth	Dec. 11	53

Wildcats and Miscellaneous

White Point Field Test Now Drilling Deeper	Jan. 2	56
Live Oak County Well Being Tested for Oil Production	Jan. 16	75
Three New Wells Reported for Zapata County Fields	Jan. 16	76
Second Test Planned for Cooksey, Taylor Marl Pool	Jan. 16	76
Extensive Wildcatting Along Edwards Plateau in Prospect	Jan. 16	78
Lee County Wildcat, South of Chapman Field, to Test	Jan. 16	68
Edwards Plateau Well Now Making 100 Barrels Daily	Jan. 23	75
Successful Caldwell County Completion Holds Interest	Jan. 23	75
Zapata County One of Most Active in South Texas	Jan. 23	75
White Point Field Well Put Back on Production	Jan. 23	76
Test for Oil in Mt. Lucas Gas Field to Be Abandoned	Jan. 23	76
Important Extensions of South Texas Production	Jan. 30	138
Five Tests in Kerr and Real Counties Attract Attention	Jan. 30	243
Four Completions, Six New Locations in Mirando Field	Feb. 6	71
Producer Defines New Area in Bexar County	Feb. 6	72
Kerr County Well Gets Test After Resetting on Packer	Feb. 6	73
Zapata County Has Two Small Completions During Past Week	Feb. 13	67
Drilling Progress Is Slow in Real and Kerr Counties	Feb. 13	68
First Producing Horizons in Live Oak County Is Defined	Feb. 13	68
Mirando District Producing Properties Involved in Sale	Feb. 20	80
Kerr County Discovery Well Pumping Only 10 Barrels	Feb. 20	82
Second Goliad County Test Finding Formations Lower	Feb. 20	82
Expect Oil Production in Goliad County Test	Feb. 27	85
Muckelroy Pool Completes and Starts Three Tests During Week	Feb. 27	87
Real County Test Running Higher than Kerr Discovery	Feb. 27	87
Six New Wells Started in Zapata County Campaign	Mar. 6	90
Kerr County Discovery Well Makes Much Water, Little Oil	Mar. 6	90
Agua Dulce Test Shows Gas With Strong Oil Indication	Mar. 6	90
Failure Leaves S.R.C. Pool Still With One Producer	Mar. 12	112
Goliad County Gasoline Well Completing At Lower Depth	Mar. 13	113
Dozen Nueces County Wells Due for Early Completion	Mar. 13	113
Caldwell County Producer Causes Much Excitement	Mar. 20	73
Real County Test Fails to Reach Kerr Discovery Sand	Mar. 20	73
Continue Exploratory Work in Lavaca County District	Mar. 20	74
Large Gas Well Completed in Northern Goliad County	Mar. 20	75
Salt Flat Prorated Output 70 Per Cent of Potential	Mar. 27	82
Test Drilling in Grayburg Pool Incites Wide Interest	April 3	79
Jim Wells County Gas Well Opens New Producing Area	April 3	80
Fourth Well for Slick Pool Is Located in DeWitt County	April 3	80
Second Successful Well in Live Oak County Expected	April 3	80
Real County Test Is Failure at Contract Depth, 4002 Feet	April 3	80
Tests Drilling in Caldwell County May Prove Promising	April 3	80
Well South of Darst Creek Production Looks Promising	April 3	80
Third Extension of Discovery Pool in Bee County Is Assured	April 10	74
Discovery New Gas Sand in Muckelroy Extension Pool	April 10	74
Another Natural Gas Horizon Is Proven in Caldwell County	April 17	80
Northern San Patricio County Is Assured New Gas Field	April 24	88
Latest Balcones Discovery Well to Be Drilled Deeper	April 24	88
Second Oil Producer Completed in Wildcat Area of Bee County	May 1	73
Muckelroy Pool Leads Mirando District in Total Production	May 1	74
Muckelroy Pool Is Extended Three-Fourths Mile to South	May 8	123
Houston Oil Continues Mount Lucas Drilling	May 8	124
Complete Large Gas Well in San Patricio County	May 8	124
Thirteenth Well in Hidalgo County Tested This Week	May 15	70
White Point Field Well Is Ready for Drilling In	May 15	70
Plan Second Test for Area Five Miles North of Goliad	May 22	68
Expect Bee County Gas Well Later to Begin Flowing Oil	May 29	64
Nueces County Gas Well Runs Wild, Sprays Oil	May 29	64
Mirando Deep Test Drilling Deeper After Showing Water	May 29	64
Valley Towns Offer Bonus for First Oil in District	June 5	68
Cole Field Extension Well Producing From New Level	June 5	68
Three Muckelroy Producers Have 250 Barrels Initial	June 5	69
Refugio County Wildcat Cores Favorable Sand	June 12	69
Mount Lucas Well Has Show at Shallower Depth	June 12	69
Third Field in Luling Area in Prospect Showing Oil	June 12	69
Two Wells Under Way in Lower Edwards Plateau, Kerr County	June 12	70
Guadalupe County Wildcat Has Important Gas Showing	June 19	70
Deeper Production Found in Mt. Lucas Gas Area	June 19	70
White Point Test Failure Despite Favorable Showing	June 19	71
Plan to Install Gas Lift on Live Oak County Well	June 26	68
Only Two Operations Active at Muckelroy, Zapata County	June 26	69
Several Tests of Real-Kerr Deep Horizons Are Planned	June 26	68
New Shallow Oil Pool Is Opened in Starr County	June 26	69
Well in Mount Lucas Gas Area Makes Small Pumper	July 3	63
Another Balcones Fault Field for Guadalupe County Likely	July 3	63
Seek Deep Production in White Point Field	July 3	64
Gas Pressure Causes Trouble in Well Northwest of Saxet	July 3	63
Brooks County Wildcat Most Interesting in South Texas	July 10	63
Guadalupe County Well Good for 50 Barrels Daily on Pump	July 10	63
Kerr-Real District Test Passes 4000-Foot Level Without Results	July 10	64
Still Trying for Drill Stem Test on Well Eight Miles South of Refugio	July 10	64
No New Developments in Love Area, Kerr-Real Counties	July 17	64
Drilling Counties in Two Tests in White Point Field	July 17	65
New Pool Seems Likely in Northern Bee County Area	July 17	65
Reduced Oil Prices Fail to Halt Search for New Fields	July 17	64
Test Near Goliad May Open New Oil Field for Southwest Texas	July 24	59
West Extension to Cosden Pool Fails to Materialize	July 24	59
Goliad County's Second Oil Field Opned By Small Well	July 31	111
Liveoak County Well is Placed on Pump	July 31	110
Jim Wells County Well is Small Gasser at 2804 Feet	July 31	110
Witherspoon Takes Over 1370-Acre Unitized Block	Aug. 7	62
Test in Welder Gas Field is Abandoned	Aug. 7	62
Plug Back Goliad County Well to Avoid Salt Water	Aug. 7	62
Location Made for Offset in New Pool Near Pettus	Aug. 7	63
Seek to Deepen Cosden Pool Well to 6000 Feet	Aug. 14	58
Latest Mt. Lucas Field Test Proves Unsuccessful	Aug. 14	58
Another Producer Probably in Pool in Bastrop County	Aug. 14	59
Unsuccessful Efforts Made to Work Over Goliad County Well	Aug. 14	59
Third Well Is Completed in New Serpentine Field	Aug. 21	61
Survey Shows Well to Be in De Witt Rather Than Goliad County	Aug. 21	62
Record Small Completion in Cooksey Area, Bexar County	Aug. 21	62
Another Wildcat Projected in Northeast Frio County	Aug. 21	62
Resumption of Activities in Real-Kerr District is Promised	Aug. 21	62
Another Gas Field Is Opened in Southwestern Nueces County	Aug. 28	54
Shut Down Kerr County Well Heads and Sprays Some Oil	Aug. 28	55
Plan Another Test of Block in New Goliad County Field	Aug. 28	55
Several Tests in Mirando Area Hold Wide Interest	Sept. 4	60
Humble Establishes New Gas Structure in Refugio County	Sept. 4	60
Extension Provided Shallow Pool Near Rio Grande City	Sept. 4	60
Unusual Edwards Lime Well Completed Near Darst Creek	Sept. 4	61
Plan New Test for Holsmark Gas District of Bee County	Sept. 4	62
Southwest Texas Deepest Test Is Finally Abandoned	Sept. 11	57
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Activity in Shallow Fields of Zapata County Is Resumed	Sept. 11	58
Humble Makes Location for Test in Guadalupe County	Sept. 11	58
Large Gas Well Completed in Carolina Texas Field	Sept. 11	58
Test in Welder Gas Area Coring Before Completion	Sept. 11	58
Southwestern Nueces County Well Promises New Gas Field	Sept. 11	59
Southwest Nueces County Well Is Freak Producer	Sept. 18	59
Northern Bee County Promised Extensive Drilling Campaign	Sept. 18	59
Finally Controls Gas Pressure in Northen Refugio County Test	Sept. 18	59
Second Test Is Announced for New Goliad County Area	Sept. 18	60
Third Well in Welder Gas Field Area Better Than First	Sept. 18	60
Northeast Frio County Test Arouses Interest	Sept. 25	64
East Offset to Wildcat Producer is Promising	Sept. 25	64
Still Having Trouble With Nueces County Wildcat Well	Oct. 2	66
Develops Shallow Lube Oil Pool in Medina County Area	Oct. 2	66
Second Large Gas Well Completed in Welder Area	Oct. 2	68
Test in Kerr County Has Gas Show at 3035-80 Feet	Oct. 9	65
Large Gas Well in Refugio County Still Running Wild	Oct. 9	65
Bee County Discovery Well Is Most Important in South Texas	Oct. 23	55
New Oil Structure East of Cole Gas Field Is Proven	Oct. 23	56
Another Guadalupe County Crevice Gusher Expected	Oct. 23	56
Test Near Sinton in Welder Gas Area Has Good Showing	Oct. 23	56
New Bexar County Shallow Gas Field Is Now Imminent	Oct. 30	52
Muckelroy Extension Pool Well Good for 300 Barrels	Oct. 30	52
Start Three Deep Wildcat Tests on Kelsey Structure	Oct. 30	52
Larrimore Pool Well Good for 15 Barrels	Oct. 30	57
Further Extension of New Sand in Cole Pool Is Anticipated	Nov. 6	77
Large Gas Well Reported in Hidalgo County, Texas	Nov. 6	77
Bexar County Is Scene of Extensive Drilling Work	Nov. 6	78
Rig Up Test Southwest of Welder Gas District	Nov. 6	81
New Wells and Operations Are Reported for Jennings, Texas, Field	Nov. 13	66

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Webb County Test Preparing to Complete at 3026-59 Feet	Nov. 13	67
Will Attempt to Prove Balcones Fault Field in Caldwell County	Nov. 20	63
Zapata County Continues Center of Interest in Southwest Texas	Nov. 20	63
Carolina-Texas Pool Test, Webb County, Is Promising	Nov. 20	64
Important Balcones Fault Test to Be Started in Bastrop County	Nov. 27	55
New Coastal Oil Field in Refugio County Imminent	Nov. 27	56
Activity in Muckelroy Pool of Zapata County Increased	Nov. 27	56
Wildcatting Interest in Southwest Texas Turns to Lower Rio Grande	Dec. 4	59
No Completions Are Recorded in Zapata County During Week	Dec. 4	59
Nueces County Wildcat is Shut Down After Threatened Blowout	Dec. 4	60
New Cole Field Oil Area Showing Heavy Sand Below New Horizon	Dec. 4	60
Test in Southern Gas Field of McMullen County Is Promising	Dce. 4	60
Three Producers Completed in Jennings-Muckelroy Extension	Dec. 11	51
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Refugio County Wildcat Producer Further Defines New Coastal Structure By Earl Post	Dec. 11	52
Cole Petroleum Company Starts Seventy-Third Test	Dec. 11	53
Bee County Test Cores Sand at 3555-63 Feet	Dec. 11	53
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Plans to Deepen Test in Carolina-Texas Field	Dec. 11	53
Still Trying to Make Producer of Test South of Agua Dulce Field	Dec. 18	52
Four New Producers Feature Zapata County Operations	Dec. 18	52
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Escobas Field, Zapata County, Most Active Area in South Texas	Dec. 25	57
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Bee County Well Is Now Ready for Production Test	Dec. 25	57
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TEXAS GULF COAST
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Gulf Coast Records General Increase in Drilling Work	Nov. 6	79
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Barbers Hill Production Found Below 1888 Feet of Solid Salt	Feb. 20	74
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Inner Producing Limits at Barbers Hill Established	Mar. 20	74
Three Wells Are Completed Around Barbers Hill Dome	April 3	81
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Barbers Hill Is Active With Three Completions for Week	April 17	78
Well Completed at Barbers Hill Good for 1475 Barrels	May 1	75
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Producer Is Completed on West Side of Barbers Hill	June 5	70
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Sun Oil Company Brings in Well at Barbers Hill	July 31	111
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Develops Shallow Production on East Flank of Barbers Hill	Oct. 30	54
Barbers Hill Production Records Steady Decline	Nov. 6	79
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Active Leasing Follows Gas Show in Montgomery County Test	Dec. 11	54
New Gas or Oil Field Looms After Montgomery County Strike	Dec. 18	54
Leasing Continues Active Near Montgomery County Wildcat Well By Roy E. Leigh	Dec. 25	59

Thompson Dome

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New Field Opened on Gulf Land in Fort Bend County	May 29	68
Second Oil Producer Is Completed at Thompson	July 3	65
Fourth Producing Well Completed at Thompson Dome	Aug. 28	56
Complete Fifth Producer at Thompson Dome, Fort Bend County	Sept. 4	64
Thompson Dome Well Shows Salt Water at 3940 Feet	Sept. 25	65
Thompson Dome Development Makes Good Progress	Oct. 9	66
Two Thompson Dome Prospect Wildcats Are Flowing Oil	Oct. 23	57
Another Fort Bend County Wildcat Well Productive at Thompson	Nov. 6	79
Another Semi-Wildcat Producer at Clear Lake	Nov. 13	68
Clear Lake's Daily Average Production Now 7646 Barrels	Nov. 27	57
Four Projects Underway in Thompson Dome Field	Dec. 4	61
Clear Lake Completion is Good for 2640 Barrels Daily	Dec. 11	54

Wildcats and Miscellaneous

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Two Flank Wells Completed at North Dayton	Jan. 2	59
Complete Large Gas Well in Bloomington Area	Jan. 2	56
Operators Lease Extensively Over Large Area in Lavaca County	Jan. 2	59
Lost Lake Extended Slightly Southward	Jan. 9	62
Hankamer Field Extended Slightly Northward	Jan. 9	63
Abandons Cedar Bayou Test	Jan. 9	63
Establishes New Deep Zone on Esperson's West Flank	Jan. 23	74
Test Showing for Western Extension of Raccoon Bend	Feb. 6	74
Test for Sulphur at Moss Bluff Dome is Abandoned	Feb. 13	69
Gulf Abandons Deep Test Off West Edge of Hankamer Dome	Feb. 13	69
First Lost Lake Well Drills Into Salt and Is Abandoned	Feb. 27	88
Allen Dome Test Quits After Try to Drill Through Salt	Mar. 6	92
Two Sands Yield Two Grades in Same Well at Pierce Junction	Mar. 6	92
Plan Milam County Test in Search Along Mexia Fault	Mar. 6	88
Fourth Failure at Cedar Bayou, Chambers County	Mar. 13	115
Fail to Extend Raccoon Bend Field to Northwest	Mar. 20	74
High Island Workover Now Producing from Lower Level	Mar. 20	74
Cross Timbers District Test in Harris County Abandoned	Mar. 20	75
Humble Diminishes Drilling Work in Raccoon Bend Field	April 3	81
Several Completions Loom for Pierce Junction	April 3	81
Two Wells Are Completed in Pierce Junction Field	April 10	75
Activity Centers on West Side of Moss Bluff	April 17	79
Attempt to Get Production in San Jacinto County Fails	April 17	79
Two Producers Completed at Pierce Junction	April 17	78
Activity at Raccoon Bend Now Reduced to a Minimum	April 17	78
Pierce Junction Field Well Good for 360 Barrels Initial	April 24	87
Plan Second Location in Vidor Area, Orange County	May 1	75
Wildcat Test Near Lufkin Attracting Wide Interest	May 1	75
Shepherds Mott Wildcat Abandoned at 5244 Feet	May 8	125
200-Barrel Well Raises Blue Ridge Production	May 8	125
Locate Fourth Deep Test in Lavaca County Near Ezzell	May 15	73
Brazoria County Gets Two Failures During Past Week	May 15	72
Stratton Ridge Dome Test Sets New Field Depth Record	May 22	70
Ninth Failure on San Felipe Prospect, Austin County	June 12	71
Liberty County Wildcat With Many Records Quits	June 12	71
Second Test Starting in Northern Liberty County	June 12	71
Lee County Wildcat Test Down to 3200-Foot Level	June 29	69
Houston County Scene of Numerous Wildcat Tests	June 26	69
Bonus Offer Accelerates Liberty County Activity	June 26	69
Wildcat North of Cypress, Harris County, Abandoned	July 10	65
Wildcat Test on Chocolate Creek Prospect Abandoned	July 10	65
Gas Producer Completed in Jackson County Field	July 17	67
Nacogdoches County Test Passes 5000-Foot Mark	July 24	58
Another Mykawa Test Added to List of Failures	July 31	111
Well in Old Blue Ridge Field Has Initial of 126 Barrels	July 31	111
Two Wildcat Locations for Nacogdoches County	July 31	111
Lavaca County Wildcat Deep Test Is Abandoned	July 31	111
25-Million Cubic-Foot Gas Well Completed at Edna	July 31	111
Markham Producer Yields 500 Barrels Initial Oil	Aug. 7	64
Nacogdoches County Deep Test Is Shut Down	Aug. 7	64
High Island Well's Initial Production Is 700 Barrels	Aug. 7	64
Esperson Deep Test Is Temporarily Abandoned	Aug 7	64
New Nacogdoches County Wildcat Shut Down at 82 Feet	Aug. 7	64
Possible New Deep Sand Discovered at Markham	Aug. 21	63
Test At Shepherds Mott Abandoned At 4960 Feet	Aug. 21	63
Gulf's Hankhamer Wildcat Shows Oil at 3965 feet	Aug. 21	63
Only One Active Wildcat Drilling in Lee County	Aug. 21	63
Prepare to Test Robertson County Wildcat Project	Aug. 21	63
Progress Temporarily Halted in Milam County Wildcat Test	Aug. 28	56
Complete Good Producer at Hull at Unusual Depth of 4450 Feet	Aug. 28	56
Wildcat Drilling Activity in McLennan County Stops	Aug. 28	56
Wildcat Activities in Bell County Bring Little Results	Aug. 28	56
Two Burleson County Wildcats Abandoned	Aug. 28	56

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Set Casing at 3050 Feet in Nacogdoches County Well	Sept. 4	62
Houston County Test Near Lovelady Has Show of Gas	Sept. 4	64
Abandon Well in Hankhamer District, Liberty County	Sept. 11	59
Eastern Nacogdoches County Scene of Three Wildcat Tests	Sept. 11	61
Abandon Two Wildcat Tests in Milam County	Sept. 11	61
Test in Burleson County Abandoned at 1300 Feet	Sept. 25	65
Nacogdoches County Well Tests Salt at 3001 Feet	Oct. 2	67
Fort Bend County Wildcatters Are Active With Three Tests	Oct. 2	67
Harris County Wildcat Logs Miocene Formation	Oct. 2	67
Announce Locations for Two Jefferson County Tests	Oct. 2	67
Gulf Spuds in Test in Pierce Junction Field	Oct. 2	68
Second Citrus Grove Prospect Wildcat Is Preparing to Spud	Oct. 23	57
Two Locations Boost Wildcat Activities in Austin County	Oct. 23	57
Milam County Test Is Drilling at 4700 Feet	Oct. 23	57
Two Burleson County Tests Drilling Ahead	Oct. 23	58
Three Nacogdoches County Tests at Interesting Depths	Oct. 30	51
Liberty County Wildcat Depends on Results of Core	Oct. 30	57
One of Three Wildcats in Burleson County Abandoned	Nov. 6	73
Harris County Wildcat Abandoned in Big Lime	Nov. 13	68
Two Feet of Sand Cored in Houston County Test	Nov. 13	68
Matagorda County Wildcat Has Gas Show at 5475-5510 Feet	Nov. 20	64
Drilling in Fort Bend County Records Substantial Increase	Nov. 20	65
Completion at Pierce Junction Is Good for 500 Barrels	Nov. 20	65
Another Completion Recorded on Cade Lease, High Island	Nov. 20	66
430 Barrels Flush Obtained from Matagorda County Well	Dec. 4	61
Cheek Dome Prospect Passes 6381 Feet Without Showing	Dec. 4	61
Believe Commercial Gas Found in Houston County Wildcat Test	Dec. 4	61
Activity in Fort Bend County Shows Increase	Dec. 4	61
Pierce Junction Field Gets 700-Barrel Completion	Dec. 4	62
Shale Last Entry in Log of Wildcat Drilled Near Lissie	Dec. 4	62
Harris County Test Reports Gas Showing at 2500 Feet	Dec. 4	62
Exploration Efforts of House in Liberty County Discontinued	Dec. 18	55
Cheek Dome Prospect Pronounced Dry and Abandoned at 6537 Feet	Dec. 18	55
Red Bank Oil Company to Skid Location for Milam County Test	Dec. 18	56
Blue Ridge Field Is Extended 800 Feet North by Coronado Well	Dec. 18	56

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Commercial Oil Production Indicated on Balsey Structure, Utah	June 26	60
No Further Work Being Done on Salt Valley Discovery Well (Utah)	July 3	56
Deep Test of St. George District, Utah, Is Planned	Oct. 2	59
Reports Test Planned for Cane Creek Dome, Utah	Oct. 9	59
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Grand County, Utah, Test Now Drilling in Salt at 4350	Dec. 11	46

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Find Second Gas Sand in Rattlesnake Hills	Aug. 28	57

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Make Important Discovery Heart of Big Muddy Field	Mar. 20	66
Big Muddy Field Deep Test Makes 400-Barrel Producer	April 3	74
Osage Field Operators Set $1.05 Per Barrel Crude Rate	April 3	74
Big Muddy Field Deep Test Good for 200 Barrels Daily	April 10	76
Osage Field Completions Sets New Record Output for Area	April 17	69
Test on Garland Dome to Be Drilled to 4500 Feet	May 8	129
Badger Basin Test Deepest in Rocky Mountain District	May 15	60
Unit Operation of Piceance Creek Structure Is Approved	May 15	60
Interesting Wildcat on Fiddle Creek Structure	June 12	64
Get Second Good Showing of Gas on Shawnee Structure	July 3	56
Osage Light Oil Field Most Active District in Wyoming	July 10	57
Rocky Mountain's Deepest Test Flows at 12-Hour Intervals	July 17	57
Expect Wyoming Government to Require $1 Minimum Price	Aug. 14	44
Report Slow Progress on Test in Boxelder Basin	Aug. 14	50
Midway Dome Test Cleaned of Bridge Without Trouble	Aug. 14	50
Wildcat Near Cheyenne, Wyoming, Finally Abandoned	Aug. 14	50
Another Commercial Oil Field Proved in Northwest Wyoming	Aug. 21	52
Meeting Discusses Resurvey of Most of Osage Oil Field	Aug. 28	57
Complete 200-Barrel Well in Osage Field, Wyoming	Sept. 4	54
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Two Completions Are Near in Garland, Wyoming Area	Sept. 11	52
Lance Creek's Deep Test Attracts Wide Interest	Sept. 11	52
Phillips Core Drilling Near Completion in Eastern Wyoming	Sept. 18	52
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Pipe Lines and Transportation

CONSTRUCTION NEWS

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Plan Completion of Tyler Pipe Line by End of April	Mar. 20	70
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Canadian Company Builds Oil Line	Mar. 27	61
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Many New Gas Lines from Louisiana Area	Feb. 6	56
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Cut Bank Gas to be Piped to Three Montana Cities	Mar. 20	66
United Gas South Louisiana Line Making Slow Progress	Apr. 3	70
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Plan Gas Line for Jackson to Hattiesburg, Mississippi	Apr. 17	83
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Gas Lines Competing for Southern Montana Business	Apr. 24	74
Company Organized to Build Gas Pipe Line to Hattiesburg	Apr. 24	87
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Push Construction Work on Central Wyoming Gas Line	May 22	61
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Many Small Lines Planned for Kettleman Gas Disposal	June 26	54
Good Progress Reported on Central Wyoming Gas System	July 3	50
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Rio Grande City, Texas, to be Served With Natural Gas	July 3	64
Franchise for Line from Baggs Structure Sought	June 26	56
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Gas Pipe Line Running East from Wyoming About Ready	Sept. 4	46
California Major Gas Line Projects Near Completion	Sept. 11	40
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New Unit of Great Lakes Pipe Line Nearing Completion	May 8	91
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Cities Service Plans Line East Texas to Shreveport	Feb. 20	63
Prairie Surveying Route to New East Texas Fields	Feb. 27	68
Humble Stops Construction on Line to East Texas Area	Feb. 27	70
100,000 Barrel Trunk Line Capacity for East Texas	Mar. 6	62
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Proposed Pipe Line Would Take East Texas Oil to Shreveport	Mar. 13	110
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Derby Oil Plans Pipe Line from Reno County to Wichita	Mar. 27	72
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Magnolia Plans 10-Inch Line for Joiner Field	Apr. 3	70
Start Work on Two Pipe Lines from Gregg-Rusk County Field	Apr. 10	73
Direct Movement of East Texas Oil by Pipe Line is Promised	Apr. 17	64
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Cranfill-Reynolds Plans Line to Link All East Texas Area	Apr. 17	64
Central Pipe Line in Service	Apr. 24	84
Stanolind May Build Line	Apr. 24	84
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Line Will Give Outlet to Pecos County Area	May 15	40
Barnsdall-Muskogee Section of Great Lakes Line Ready	May 22	56
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Cities Service to Handle Crude Through Baton Rouge	June 19	59
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Texas-Independent Line is Proposed to Ship Channel	July 3	50
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White Eagle Plans Line to Ritz-Decker-Garrett Field	July 3	55
Making Survey for Independent East Texas-Houston Line	July 10	52
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East Texas Assured Facilities to Handle 600,000 Barrels	July 17	62
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Stanolind Plans Big Increase in Line Capacity to Whiting	Aug. 28	44
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Atlantic's East Texas Line to Atreco Ready October 1	Sept. 25	48
Three Groups to Operate New East Texas Carrier	Oct. 2	52
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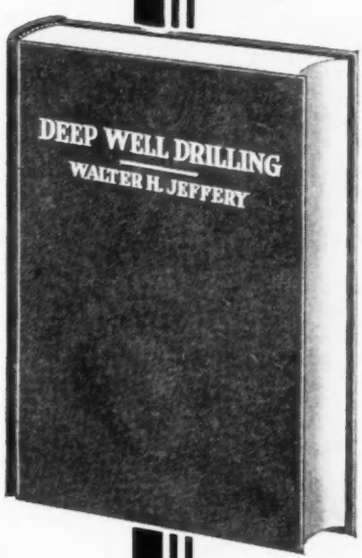

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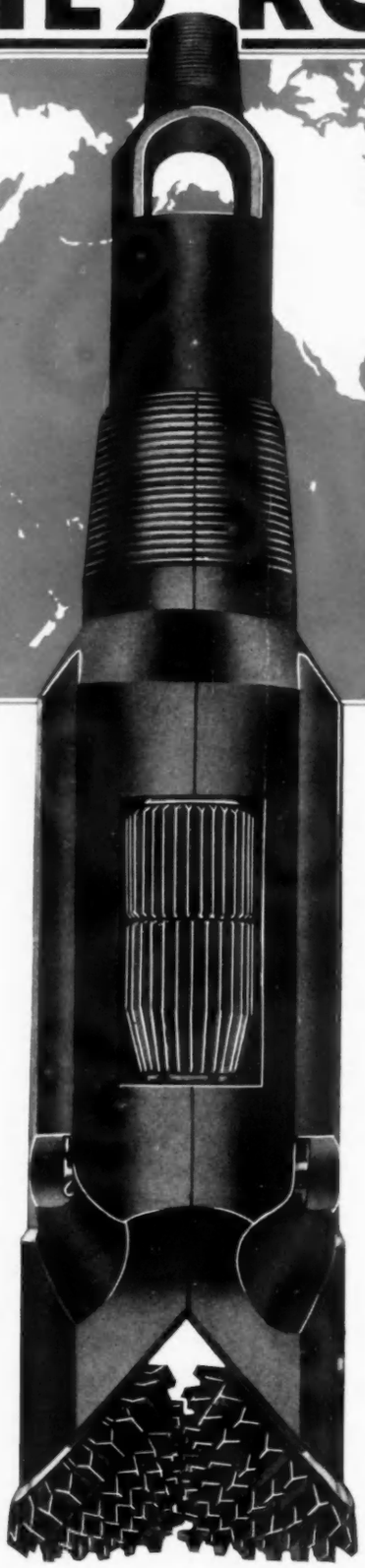

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